Elijah Willard

ASSOCIATION

Illinois

(L's. Legis. Career)

(see L.Lore 1483 #12)

LINCOLN NATIONAL LIFE FOUNDATION

Autograph of Elizabeth Todd Porter Owens Ill. Cons. 3rd. Internal Rev., on card + ply see #131.

19098 cat. 205

Elyäkkiläsä

Friday, December 28, 1838.
Laid on the table, and 5,000 copies ordered to be printed.

MESSAGE

FROM

THE GOVERNOR

TO

THE GENERAL ASSEMBLY OF ILLINOIS,

TRANSMITTING

THE SEMI-ANNUAL REPORTS

OF THE

BOARD OF COMMISSIONERS OF PUBLIC WORKS,

MADE

IN COMPLIANCE WITH THE TENTH SECTION

OF THE

ACT ESTABLISHING A GENERAL SYSTEM

OF

INTERNAL IMPROVEMENTS.

VANDALIA:
William Walters, Public Printer.
1838.

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MESSAGE.

EXECUTIVE DEPARTMENT,

Vandalia, December 27, 1838.

SIR: In compliance with the 10th section of the act establishing a general system of internal improvements, I have the honor, herewith, to transmit to you the semi-annual reports of the Board of Commissioners of Public Works, together with exhibits and accompanying documents, which embrace all the information in possession of this Department, in relation to the conduct and management of the public works under the direction of the said Board.

The great importance of these documents renders it highly necessary that the originals should be carefully preserved on the files of this Department; and their voluminous character would have prevented me, in any reasonable time, to have them copied.

I would therefore respectfully recommend to the House of Representatives the propriety of appointing a committee to superintend their printing, with a view to preserve, as far as practicable, the originals without being defaced or injured, and cause them to be returned to this Department.

I have the honor to be, sir,
Your obedient servant,
THOMAS CARLIN.

To the Hon. the SPEAKER
of the House of Representatives.

REPORT

OF

THE BOARD OF PUBLIC WORKS.

VANDALIA, ILL., *Dec.* 26, 1838.

To his Excellency THOMAS CARLIN,
Governor of the State of Illinois:

SIR: In accordance with the requisitions of the 10th section of the law establishing a general system of internal improvements, the undersigned, Commissioners of the Board of Public Works of the State of Illinois, submit to you the following

REPORT.

In performing the various duties enjoined upon them by law, the Board have found many difficulties to encounter. This was partially owing to the want of experience on the part of the officers and agents employed, the scarcity of mathematical instruments and apparatus necessary to a survey and reconnoissance of the different lines of road contemplated by law. In the first lettings of contracts, too, the absence of experienced and energetic contractors presented difficulties which no energy or efforts of the Commissioners could surmount; yet it is believed that, in most instances, contracts were let, at fair prices, to responsible and energetic contractors.

In the performance of this duty, they have met with various other difficulties. The law under which they were required to act was found, upon experience, to be, in many particulars, defective.

The Commissioners were required to purchase lands for the use of the State, not absolutely necessary to the construction of any particular work. They were required to establish an office at the seat of Government and employ a secretary to keep said office. They were required to employ engineers and general agents, whose services could not be confined to any particular work; yet all the appropriations made by law were special, and confined to particular objects, and no fund was provided for any of those general objects of expenditure. Defects were found to exist in various other parts of the act, that render it difficult to be understood, and often still more difficult to execute.

The present mode of acquiring the right of way over the land of the citizens has been a source of much difficulty to the Commissioners, dissatisfaction to the land owners, and, in many instances, great and unavoidable cost to the State.

The mode of declaring contracts forfeited, and of reletting those contracts, has been found defective, and, under some circumstances, must operate to prevent the progress, or occasion a very great delay in the prosecution of the work.

Doubts have been suggested as to the power of the Board to bestow upon its individual members power to do or perform acts absolutely necessary to be done in their respective circuits, or in other circuits for which they were not expressly commissioned, in reference to the location of roads and other duties: and in short the whole law seems to have been suited to the duties of a Board, appointed generally for the whole State, whose powers should be general, operating in all parts of the State alike, and not of a Board composed of members elected for, and whose duties would seem to be confined to, particular circuits.

Great inconvenience, cost, and uncertainty have been met with by the various members of the Board in executing the law in relation to letting contracts. The different members of the Board, and the works upon which they are engaged, must necessarily be far separate from each other. The law requires the attendance of two Commissioners at each letting, and makes no provision (in case the second Commissioner should not attend) that the acting Commissioner upon the line may call to his aid any judge, justice of the peace, or other officer, so that if by any casualty, there should not be two Commissioners present, the whole object of the law should not be defeated, the lettings fail, and the work delayed, at great cost, and injury to the public interest.

The law has also been found defective in the provisions for paying contractors and others engaged in the construction of the different works. If it was intended by the provisions of the 24th section that no draft should be drawn in favor of this class of persons for a less sum than twenty thousand dollars, then indeed the law becomes almost inoperative, as in paying monthly estimates (which is found to be necessary) very few contractors perform work to that amount. A Commissioner cannot have on hand more than twenty thousand dollars at any one time, (which, under a proper provision of the law, would be a sum sufficiently large;) yet it may and sometimes has happened that he has been required to pay, monthly, more than forty thousand dollars to contractors, no one of whom was entitled to receive a draft upon the Fund Commissioners for twenty thousand.

Some difficulty exists in the proper construction of the law in relation to the duty of the Board, or the Commissioners, in the location of the roads within their respective circuits. This duty, in almost every instance, has been performed by the engineers engaged upon the lines, after a thorough examination and survey of every plausible route; and the one that appeared cheapest, and in all respects the best for the interest of the State, has been adopted. The Commissioners have not believed themselves at liberty to depart from those routes, notwithstanding how much it might be desired for the promotion of individual interest, or the supposed interest of isolated parts of the community through which the roads pass.

A difficulty has also arisen as to the proper construction of the 33d section of the law. By some members of the Board, the proviso to the said section was understood to refer to county or other important trading towns, by which the law, by the various provisions of the 18th section, expressly required the roads to pass, and that those towns might be avoided and lateral branches constructed thereto, if, in the opinion of the Board, the public good required it. Others understood, from this law, that it was the duty of the Board, without any discretion whatever, to locate the roads to the towns mentioned in the law, and that the places mentioned in the 33d section, to which lateral branches were authorized to be made, were towns not mentioned, situated within five miles of the main lines of the different roads. If this law could have been understood to bear the former construction, many thousands of dollars could have been saved to the State, and the roads, in many instances, rendered more useful to the community, as many of the towns, made points in the law, were found to be so situated that they could not be reached by the main lines without great cost, and much delay in the construction of the works. In the course of practice under the present law, the Board has found an evident defect in the provisions in relation to paying estimates upon work done, and materials furnished by contractors. After an estimate has been paid upon materials delivered upon the line of the road, it must necessarily be left there to be used and placed in the work by the contractor; yet there is no positive law to protect this property from the force of an execution against the contractor. Although it may be contended that property so situated could not be made subject to an execution, yet it would leave no doubt if the statute made a proper provision against it. With a view to protect the interests of the State, the Board has thus pointed out what they have found to be defects in the law, that it may be seen and remedied by those whose business it is to guard the public good, and look after its interest.

When the Board was first organized, their attention was turned to the 52d section of the Internal Improvement law. By this section it would seem that the Board were required, without any discretion whatever, to survey and locate all said roads, and put under contract a part of each, so soon as they could possibly perform the same. By the 25th section of the same law, it is provided that the Board should order a fair, equitable, and uniform progress of all the said works, at the same period of time; and that all of said roads should be immediately commenced at their intersection and connection with navigable streams; and that they should progress in both directions from said streams. Under these provisions of the law, the Board could not misunderstand their duty. Almost every railroad projected in the State intersected navigable streams in various places. The Board was clothed with no discretion whatever. They were bound by law to commence the construction of all the roads, so soon as the same could be located and fitted for contract. They felt no disposition to shrink from this duty. The members had no doubt of the propriety of the law, yet they had nothing to do with the policy thereof, or the wisdom of its provisions.

At the first meeting and organization of the Board, an ordinance was passed giving all the power to each Commissioner that, by law, was given to the Board, in relation to the location and construction of all the

railroads within their respective circuits, commencing as the law directed. This was believed to be proper, as it was clear, from the law that neither the Board, nor any one of its members, could proceed faster, or do more in a less time, than the law contemplated; yet, after this power was conferred, it was thought prudent, by most of the Commissioners, not to let or to contract any considerable portion of the public works until it was ascertained that the Fund Commissioners should be successful in procuring the necessary funds to progress with the work.

But this precaution was not deemed necessary in relation to the Northern Cross railroad, as it will be seen, by reference to the 53d, 54th and 55th sections of the law, that a preference was given to this road, and that the same should be put under contract, whether any money was obtained or not, provided the contractors would agree to receive State bonds for the work performed by them.

Under these provisions, the Commissioner of the first judicial circuit proceeded to survey, locate, and put under contract, all that portion of the said road situated between the Illinois river and Springfield, in Sangamon county; all of which location and acts of said Commissioner, and the contracts there made, were approved and confirmed as the act of the Board.

Because of this provision in the law, and by the reason of the letting of these contracts, said road is in a greater state of forwardness than any other portion of the railroads of the State. Several miles have been completed, and a locomotive engine is now in operation thereon.

So soon as it was ascertained that money had been obtained, and a prospect existed of procuring means to pay contractors, each Commissioner proceeded with every possible despatch to commence the different works at the proper points, and to survey the whole of said roads. It was, however, deemed prudent to change the order in relation to putting roads under contract, so as to provide against letting any work without an order of the whole Board for that purpose. This was done to arrive at uniformity and to insure a gradual and equal progress of all the public works in the State.

Under this arrangement, and under the provisions in relation to the Northern Cross railroad, the following parts of the different works have been put under contract, up to this date:

Central Railroad.

	Miles.	
Grading from Galena, southerly - -	20	
Grading from Peru, northerly and southerly -	22	
Grading and timber from Cairo, northerly -	23	
Grading across the Oakaw river, near Vandalia -	4½	
	—	69½

Peoria and Warsaw Railroad.

Grading from Peoria, westwardly - -	12	
Grading from Warsaw, eastwardly - -	12	
	—	24

Alton and Shawneetown Railroad.

Grading and timber from Shawneetown to Equality	12	
Grading at the crossing of Silver creek - -	3	
	—	15

Northern Cross Railroad.

Grading from Quincy to Columbus - -	16½	
Grading from Danville, westwardly - -	18	
Whole work from Meredosia to the Sangamon river	64	
Naples branch - - -	3½	
Grading westwardly from Meredosia - -	3	
	—	105

Alton and Mount Carmel Railroad.

Whole work from Alton to Edwardsville -	15	
Grading and timber from Mount Carmel to Albion	18	
Grading and viaduct at the crossing of the Oakaw -	2	
Grading at the crossing of the Little Wabash -	3	
	—	38

Alton, Shelbyville, and Paris Railroad.

Grading and superstructure from Alton, eastwardly	13	
Grading and timber from the State line, westwardly	18	
Grading at the crossing of the Embarrass river -	2	
	—	33

Bloomington, Mackinaw, Peoria, and Pekin Railroad.

Whole work from Pekin to Tremont - - -	9¼
	293¾

Making the whole amount of railroad, now under contract, two hundred and ninety-three miles and three-fourths; one hundred and five miles

of which is to be completed. Of thirty miles, the grading and timber for the superstructure are let; and of the residue, the grading only is let.

The various parts of the roads under contract consist of deep cuts, heavy embankments and costly viaducts, and are by far the most expensive portions of the whole work. This is owing to the fact that the lines under contract pass through the highlands and broken country bordering upon the navigable streams and other water courses of the country; consequently, the average cost, per mile, of the roads under contract, will far exceed that of any other portion of the roads of the State. A fair average of the roads now under contract, including superintendence, engineering, turnouts, depot buildings, and all incidental expenses necessary to complete the works, may be safely computed at twelve thousand five hundred dollars per mile.

The Board has procured to be surveyed and measured all the railroads contemplated by law in the State. The following detailed statement will show the length of each road between the points mentioned in the law—the whole length of each road—and the total length of all the roads contemplated in the State.

SEVENTH DIVISION—*Central Railroad.*

	Miles.
From Cairo to Vandalia - - - -	155
Shelbyville - - - - -	36½
To Decatur 36 miles—Bloomington 43½ - -	79½
To the termination of the Illinois and Michigan canal	60
To Savannah 93¾ miles—Galena 30¾ - -	126½
Making the total length of the Central railroad - -	457½

EIGHTH DIVISION—*Alton and Mount Carmel, or Southern Cross Railroad.*

From Alton to Edwardsville - - - -	14
To Carlyle - - - -	37
To Salem - - - - -	23
To Fairfield - - - - -	39
To Albion - - - - -	16
To Mount Carmel - - - - -	18
	147

Shawneetown Branch.

From the intersection near Edwardsville to Lebanon - -	18
To Nashville - - - - -	30
To Pinckneyville - - - - -	19
To Frankfort - - - - -	30
To Equality - - - - -	38
To Shawneetown - - - - -	12
	147

	Miles.
From Alton to Mount Carmel (as above)	147
Shawneetown branch (as above)	147
Making the total length of this road	294

NINTH DIVISION—*Northern Cross Railroad.*

From Quincy to Columbus	16½
To Clayton	12
To Mount Sterling	9½
To Meredosia	15½
Naples branch	3½
To Jacksonville	23½
To Springfield	33½
To Decatur	37½
To Sidney	47¾
To Danville	23½
To State line of Indiana	11½
Making the total length of this road	234½

TENTH DIVISION—*Shelbyville and Paris branch of Central Railroad.*

From Shelbyville to Charleston	34
To Paris	27
To State line of Indiana	10½
Making the total length of this road	71½

ELEVENTH DIVISION—*Peoria and Warsaw Railroad.*

From Peoria to Canton	32
To Macomb	37
To Carthage	28
To Warsaw	19
Making the total length of this road	116

TWELFTH DIVISION—*Alton and Shelbyville Railroad.*

From Lower to Upper Alton	2
To Hillsborough	44
To Central Railroad	45
Making the total length of this road	91

THIRTEENTH DIVISION—*Belleville and Lebanon Branch.*

From Belleville to the place of intersection, at or near Highland	23½

FOURTEENTH DIVISION—*Bloomington, Mackinaw, Peoria and Pekin Railroad*

	Miles.
From Bloomington to Mackinaw town	20
From thence to Peoria	17
From Mackinaw town to Pekin	16¾
Making the total length of all the branches of this road	53¾

The following list shows the total length of each road, and the total of all the roads projected in the State:

		Miles.
1	Central Railroad	457½
2	Southern Cross Railroad	294
3	Northern Cross Railroad	234½
4	Shelbyville and Paris branch of Central Railroad	71½
5	Peoria and Warsaw Railroad	116
6	Alton and Shelbyville Railroad	91
7	Belleville and Lebanon Railroad	23½
8	Bloomington, Mackinaw, Peoria, and Pekin Railroad	53¾
	Making the total length of all the roads in the State	1,341¾

The following table shows the average cost, per mile, and the total cost, of each and all of said roads:

	Names of Roads.	Cost per mile.	Total cost.
1	Central Railroad	$8,326 00	$3,809,145 00
2	Southern Cross Railroad, and Alton and Shawneetown Railroad	8,200 00	2,410,800 00
3	Northern Cross Railroad	8,430 00	1,976,335 00
4	Shelbyville and Paris Railroad	10,589 00	757,113 50
5	Peoria and Warsaw Railroad	8,331 00	966,396 00
6	Alton and Shelbyville Railroad	8,295 00	754,845 00
7	Belleville and Lebanon Railroad	7,000 00	164,500 00
8	Bloomington, Mackinaw, Peoria, and Pekin, Railroad	11,736 00	630,810 00
	Total cost of all of the said roads		11,470,444 50

In making these estimates, the Board has included all the expenditures for superintendence, engineering, and all other incidental expenses. Easy grades have, in general, been adopted, and in all cases calculations have been made for the most useful and durable structures; and the Board has no doubt but the works may be constructed, upon the most approved plans, at the cost estimated upon each work. It is believed that, in every instance, the lines may be improved, locations changed, and improvements made in the construction, that may lessen the cost far below those prices.

The average cost of some of the roads exceeds the sum heretofore supposed to be sufficient, but this, in a great degree, is owing to the policy

adopted in the law of confining the locations to particular points situated upon high and elevated grounds, or surrounded by deep ravines and an undulating surface.

The total cost of these roads exceeds the sums heretofore appropriated for their construction. This is mainly owing to the fact that the roads, upon actual measurement, are found to be longer, and consequently to accommodate more inhabitants, and supply the wants of a much greater extent of country, than was at first contemplated. In addition to the railroads heretofore mentioned, the Board has proceeded to improve the great western mail route, as required by law. In performing this duty, they have endeavored so to distribute the benefits to be derived from the appropriations to this work, that the same should be felt at all points where improvement was necessary, without laying out large sums, and exhausting the appropriation by making costly improvements at any one place. By this course, it is believed that most of the difficult places upon this great thoroughfare may be remedied by the present appropriation. Accompanying this report are those of the Commissioners of the second and fourth judicial circuits, to which reference is made for further particulars in relation to this work.

The total length of this road is found, upon actual measurement, to be one hundred and fifty-two miles, and it is believed that very few of the improvements of the State will confer greater benefits, or could be made sooner to yield a profit, than this. The total amount of money expended upon said road, up to the first Monday in this month, is found to be $102,987 89. For particular places, and objects of its expenditure, reference is made to the reports of the Commissioners of the second and fourth judicial circuits, heretofore referred to.

Great Wabash Improvement.

Since the passage of the law in relation to internal improvements in this State, and providing for the improvement of the navigation of the Great Wabish, in connection with the State of Indiana, that State has appropriated the additional sum of fifty thousand dollars, which makes the total sum appropriated for that object by said State equal to the sum appropriated by the State of Illinois.

This money has been placed under the direction of Col. Thos. H. Blake, of Terre Haute, in that State, who, on the part of the State of Indiana, together with the Commissioner of the fourth judicial circuit, on the part of the State of Illinois, has proceeded to project, and to put into operation, a plan for the improvement of the navigation of the Grand Rapids upon this stream. Contracts have been let, and said improvement is in progress.

The contract prices for the work already let falls short of the appropriations made by the two States for that object.

The total amount of money expended by the Board, on the part of the State of Illinois, for this portion of the public improvements, amounts to the sum of $6,183 32. For further particulars in relation to this improvement, reference is made to the report of the Commissioners of said fourth circuit.

The Illinois River.

The first season after the organization of this Board, a survey of this river was commenced and carried on under the patronage of the United States: and the Board was encouraged in the belief that all the necessary information would be derived from that source; but in this the Board was disappointed. No information was ever communicated of the result of that examination; consequently a delay was occasioned for that season. After this, an unusual continuance of high water prevented the necessary examinations of the river, until about the month of September last, at which time the Commissioners of the first and seventh judicial circuits proceeded to make examinations, and ascertain, as far as was practicable within the short time allowed, the character and extent of the obstructions to the navigation of this stream.

From those examinations it is apparent that few, if any, of the streams within the valley of the Mississippi present a current so easy and a channel so favorable for navigation as this river.

The obstructions are mostly deposites of sand and gravel, which are few in number, and, except in stages of extreme low water, present but little obstruction to a free and safe navigation.

These stages of water, however, often and indeed almost always occur at a time when the free navigation of the stream is most useful to the inhabitants. It is confidently believed that the damage occasioned to the inhabitants of the valley of this stream, during the last season of unusual low water, would amount to a sum sufficient to complete all the improvements contemplated upon this stream.

The Board is, therefore, resolved to make every effort to improve the navigation of this valuable channel of communication. The sum already expended upon this work has only been for the expenditures incidental upon those examinations, and amount to the sum of $301 02. For more minute information in relation to this stream, reference is made to the report of the Commissioners of the first and seventh judicial circuits, hereto annexed.

Rock River.

The sum of one hundred thousand dollars was appropriated by law for the improvement of the navigation of this stream, and the Board was required to commence their operations thereon by removing the most formidable obstructions nearest the mouth.

Upon an examination of this river, it was found that, with the proper improvements, it would be well adapted, at all seasons, to navigation for steamboats drawing three feet water, as far up as the State line.

The most serious obstruction to the navigation of this river was found at Vandruff's Island, three miles above the mouth, commonly called the Lower Rapids. This obstruction was put under contract by the late Col. Stephenson, formerly member of this Board for the sixth judicial circuit, and the contract price amounts to sixty thousand three hundred and eighty-nine dollars. The next obstruction was found at Prophet's village, about forty-five miles above the mouth.

But the next most serious obstruction to the navigation of this stream was found in the Upper Rapids, sixty miles from the mouth, and will cost over eighty-five thousand dollars to remove. This obstruction was also advertised to be let, by Col. Stephenson, but, owing to the fact that the sum required to make this improvement, together with the improvements below said obstruction, was greater than the appropriation for that purpose, it was not let to contractors, and all further operations thereon were suspended.

It is ascertained that the sum now appropriated for the improvement of this river is not sufficient to complete this valuable work, and that the additional sum of seventy-six thousand dollars will be necessary to this object. It is believed however, by the Board, that the object to be attained would fully justify this further expenditure. For further particulars in relation to this river, reference is here made to the annexed report of John Dixon, acting Commissioner of the sixth circuit, and the accompanying documents.

Kaskaskia River.

The improvement of the navigation of this stream has long been a desirable object, owing to its central position, and from the fact, too, that it passes far into the interior of the State, and is surrounded by a country not exceeded by any for fertility of soil and salubrity of climate.

This particular improvement was placed under the control of the Commissioner of the second judicial circuit. Every effort has been made by him to forward the work, and, although greatly delayed by sickness and other unavoidable causes, this very desirable improvement is in a state of forwardness that ensures the most happy results. For further particulars in relation to this subject, reference is made to the report of the Commissioner in charge of the work. The total amount expended upon said river, up to the first Monday in this month, is two thousand and fifty-seven dollars and forty-seven cents; which sum has been expended in the engineering service, and in removing obstructions to the navigation.

Little Wabash River.

The improvement of the navigation of this river was placed under the immediate direction of the Commissioner of the third judicial circuit. Under his direction this river has been surveyed, and the locality and nature of the obstructions to the navigation determined.

It was thus ascertained that the appropriation made was inadequate to accomplish the object in the manner pointed out by law. The obstructions to the navigation by the deposite of timber in the bed of the river are now being removed; which, when completed, will greatly facilitate the navigation. This river presents the appearance of a natural canal, commencing in the county of Effingham, and passing through several of the finest counties of the State, the navigation of which is obstructed by two principal rapids. These rapids are occasioned by reefs of rocks over which the river passes, and at which points the principal

descent in the stream occurs. Both shores of this river at each of these points are private property, and dams are built and machinery erected at each, over which the State has no control. Before the navigation of this river can be thoroughly improved, which can be done only by dams and locks, it will become necessary that those rapids should be converted into State property. To do this, a much larger sum than the present appropriation will be necessary; yet the Board is clearly of opinion that the property when purchased and improved, as must necessarily be done to improve the navigation in a proper manner, and the great advantages that must necessarily accrue to the inhabitants of this fertile region of country, would fully justify an appropriation adequate to the undertaking.

The sum expended upon this river, up to the first Monday in this month, is $2,936 41½. For further particulars in relation to this part of the public improvement, reference is here made to the annexed report of the Commissioner of the third judicial circuit, and the accompanying documents.

Thus the Board has presented a detailed statement of their operations upon the rivers. They will now proceed to give a detailed account of the several sums expended upon the several public works under their control; all of which will appear in the following table:

Numbers of Circuit, and amount expended by the Commissioners upon each work.

Names of roads and rivers.	First circuit.	Second circuit.	Third circuit.	Fourth circuit.	Fifth circuit.	Sixth circuit.	Seventh circuit.	Total amount expended on each work.
Central railroad - -	3,550 67	7,641 25	39,643 60½	2,353 10	–	55,482 26	37,091 31	$145,765 19½
Western mail route -	–	74,810 94	–	28,176 95	–	–	–	102,987 89
Alton and Mount Carmel railroad - -	–	30,958 76½	1,975 29	43,795 55	–	–	–	76,729 60½
Alton and Shawneetown railroad - -	–	–	42,763 75	–	–	–	–	42,763 75
Alton and Shelbyville railroad - - -	4,535 79	665 07	–	–	–	–	–	5,200 86
Northern Cross railroad -	467,822 84	–	–	42,280 85	4,662 74	–	545 00	515,311 43
Central Branch railroad -	–	–	–	51,203 05	–	–	–	51,203 05
Peoria and Warsaw railroad	–	–	–	–	75,225 57	–	–	75,225 57
Belleville & Lebanon branch of Alton and Mt. Carmel railroad - -	–	371 48	–	–	–	–	–	371 48
Bloomington and Mackinaw railroad - -	38,022 77	–	–	–	–	–	–	38,022 77
Great Wabash river -	–	–	–	6,183 82	–	–	–	6,183 82
Illinois river - -	100 00	–	–	–	–	–	201 02	301 02
Rock river - -	–	–	–	–	–	13,933 38	–	13,933 38
Kaskaskia river - -	–	2,057 47½	–	–	–	–	–	2,057 47½
Little Wabash river -	–	–	2,936 41½	–	–	–	–	2,936 41½
	514,032 07	116,507 98	87,319 06	173,993 32	79,888 31	69,415 64	37,837 33	1,079,793 70½

The Board, in making this report, have thought it their duty to collect and embody every possible information that might shed light upon the very important and all absorbing subject of internal improvement in our State. With this view they have collected and herewith transmit copies of their individual reports, and of the different engineers engaged in the reconnoissance and location ofthe different works, thereby furnishing a mass of information that cannot fail to give to the people, and to their representatives, a full account of the proceedings of the Board, and at the same time enable them to form correct conclusions as to the inexhaustible resources of our State, and at present dormant sources of wealth and prosperity, which may be brought into action by the uniform progress and vigorous prosecution of our system of internal improvments.

If slight defects have been found in the law organizing the system, or if errors shall have been committed in carrying it into execution, it is what might reasonably have been expected in a system so extended, brought into existence by the spirit of compromise amidst conflicting and adverse interests, and carried into execution by agents heretofore without experience in such employment.

That the different members of the Board, in this first attempt, have in all things performed their various and often difficult duties, strictly in accordance with the spirit and intention of the framers of the law, could not have been expected.

In locating thirteen hundred miles of railroad, and performing other duties equally difficult, it could not well be otherwise than that errors of judgment should occur, and that we should be brought into contact with private interest, and become the unwilling though necessary and unavoidable causes of disappointment to some, and the prostration of splendid but visionary schemes of speculation in others. Under these circumstances it was not expected by us that we could perform those various duties to the entire satisfaction of all parties, or that however correct might be our course, or strongly marked by wisdom our acts, we could escape without censure, or avoid the malevolence of the disappointed.

In conclusion, the undersigned would say that the experience they have had in commencing and prosecuting the present plan of internal improvements, which in their opinion is to be the ornament and honor of the State, and the foundation of its prosperity and wealth, has brought their minds to the conclusion that the onward path is the high road to success, and that to recede or even to faulter would be to violate good faith, to disappoint the hopes and dampen the energies of this great and enterprising State.

We invite scrutiny and examination into all our public acts, indulging

a hope that we may be accredited the good we have done, and that, if errors have been committed, our successors may see and avoid them.

All of which, sir, is most respectfully submitted,

And we subscribe ourselves,

Your most humble and obedient servants,

WILLIAM KINNEY,
President.

M. McCONNEL,
Commissioner of the First Circuit.

ELIJAH WILLARD,
Commissioner of the Third Circuit.

M. K. ALEXANDER,
Commissioner of the Fourth Circuit.

J. WRIGHT,
Commissioner of the Fifth Circuit.

JOHN DIXON,
Commissioner of the Sixth Circuit.

Mr. Peck, Commissioner for the seventh circuit, having resigned before this report was made, has not therefore signed the same.

EXHIBIT No. I.

REPORT OF M. M'CONNEL,

WITH ACCOMPANYING DOCUMENTS.

VANDALIA, *December* 3, 1838.

To the PRESIDENT *of the*

Board of Public Works of the State of Illinois:

At the date of my last report, it will be seen, by a reference thereto, that the amount of money expended by me upon the public works under my charge, up to that date, amounted to the sum of one hundred and fifty-one thousand and thirty-three dollars and ninety-four cents. Of that sum, there was at that date paid out for work done, and materials furnished upon the Northern Cross railroad, the sum of one hundred and twenty-four thousand four hundred and twelve dollars and forty-five cents. There was then expended for surveys, and locating the various works under my charge, the sum of twenty-seven thousand six hundred and twenty-one dollars and ninety-four cents. At that time there were sev-

eral locating parties in the field. One party was under the direction of Mr. Wm. Pollock, engaged in the location of the roads from Peoria and Pekin to Mackinaw town, and thence to Bloomington, in McLean county, and also in the location of the Central railroad between Bloomington and the north fork of the Sangamon river, via Decatur, in Macon county. This work has been completed by Mr. Pollock so far as to be able to determine the probable cost of the construction of those routes. Mr. Pollock has made a full and complete report of all those surveys to Mr. Bucklin, the principal engineer of the western district; which is hereto attached, and referred to for further information in relation to said survey. Another of these parties was under the direction of Mr. Bucklin, principal engineer, in relocating that part of the Northern Cross railroad situated between Jacksonville, in Morgan county, and Springfield, in Sangamon county.

This part of the Northern Cross railroad had previously been surveyed and located by M. A. Chinn, but, in the opinion of Mr. Bucklin, chief engineer, the location was not made at that time in the proper place, and consequently, by his request, a company was again organized, and the road located under his immediate direction.

The other locating party was placed under the direction of Frederick Hawn, Esq., senior assistant engineer, and was engaged in the location of the road contemplated to be constructed from Alton to Shelbyville. This road I understand has been surveyed, and a report made to the Commissioner of the second judicial circuit, in whose circuit is situated the commencement and termination of said road. The only agency that I have had in this part of the public service has been to furnish the camp equipage, and to pay all the expenses of making said survey and location.

At the June meeting of the Board, all that part of the Northern Cross railroad, situated in the fifth judicial circuit, was placed under my immediate supervision. Previous to that time, contracts for the grading were let upon said road, from Quincy to Columbus, in Adams county. Those contracts have proceeded speedily, and all the jobs appear to be in a prosperous state of forwardness.

At the same meeting of the Board, it was ordered that the grading of three miles of said road on the Illinois river, commencing opposite Meredosia, be put under contract. In pursuance of this order, I proceeded to advertise said three miles as the law directs; and, in August last, the same was let to Messrs. Davenport, Henry & Co., at fair prices. Much difficulty was encountered by the engineers in estimating the cost of the large amount of masonry found necessary in this low and inundated bottom. No suitable stone could be procured within several miles of the work; and the quality when found was not known to be good.

All this taken into consideration, together with the fact that these three miles run through a low bottom, inundated by the Illinois river, almost every year, to the depth of from four to eight feet—it was ascertained that this part of the road would cost a sum far beyond all former calculations. To avoid as much as possible this result, it was determined to construct the four large abutments, necessary upon this work, of timber. Those abutments were also let to the same persons who took the contract for the embankment.

Immediately after this contract was taken, the country was visited with an unusual degree of sickness, which greatly retarded the progress of the work; yet the contractors have shown every disposition to proceed, and have made an efficient commencement.

Hereto annexed, will be found the reports of Mr. A. R. Parker, engineer upon that part of the Northern Cross railroad situated between the Illinois and Mississippi rivers; to which I refer for all further particulars upon said works.

At the meeting of the Board in June last, it was ordered, upon the petition of various citizens of Morgan county, that a lateral branch of the Northern Cross railroad be constructed from a point near the Illinois bluff to the town of Naples, in said county, upon condition that the Naples and Jacksonville Railroad Company would relinquish the charter granted them at the last general session of the Legislature of this State.

In pursuance of this order of the Board, I proceeded to cause a survey and location of said road.

It was then found that the company had done a large amount of work upon the road, and that they had a right by law to construct the road upon almost the same route for many miles then occupied by the Northern Cross railroad, and that the construction of the last mentioned road was in violation of the charter of that company, and that said charter was believed not to be within the provision of the internal improvement law in relation to relinquishing charters; and under all those circumstances it became necessary that some compromise should be made, to avoid a collision between the State and the company, and a probable delay of the whole work. It was ascertained also that the company had located said road upon the most direct route from the town of Naples towards Jacksonville, and that the work was done upon said direct route, and that the same would intersect the Northern Cross railroad, in the most advantageous and beneficial manner for the benefit of the State and the use of said branch; yet it was ascertained that a route might be had from said town of Naples to the Northern Cross road by a shorter line than the one adopted by the company; yet that line would be much more circuitous, and less useful as a road from Jacksonville to Naples, than the one adopted by the company. It was also found that as the company was by law entitled to a full compensation for work done upon their road, which must be paid for and lost to the State, and that the right of way upon their route would cost nothing, and the right of way upon the shorter route would cost a large sum of money, and their route would be cheaper to the State than the one referred to as the shorter branch; consequently, the route that was found to be the most direct, and, all other circumstances considered, the cheapest was adopted. (The communication from the President of said Railroad Company heretofore referred to, is annexed as a part of this report.)

After this branch was located, I proceeded to advertise and let the same to efficient and responsible contractors, according to the orders of the Board, upon terms highly advantageous to the State, as will be seen by reference to said contract now on fille in the proper office. The charter of the company has been relinquished; the right of way over a large amount of land has been secured for the Northern Cross railroad. A

lot for an engine house and a lot for depot buildings, at Naples, have been granted free of charge; for the particulars of which, reference is made to said contract on file in the proper office.

After said work was put under contract, the persons engaged thereon proceeded with all possible despatch towards its final completion, and said road, together with a building for a depot, is now in a great state of forwardness.

That part of the Northern Cross railroad between the Illinois and Sangamon rivers, it will be remembered, was under contract previous to my last report. Since that time the contractors upon that road, although much delayed by an unusually sickly season, have progressed speedily. All the grading, except about one-half mile between the Illinois river and Jacksonville, is completed. Several miles from Meredosia towards Jacksonville are already completed, and a locomotive of the first order is in successful operation thereon. All the grading between Springfield and Jacksonville, except about eight miles, is done, and a large amount of timber is already furnished upon the road; and it is confidently believed that, with proper diligence on the part of the officers of the State, and proper encouragement to contractors, said road may be completed and the cars running to Springfield on the fifteenth of September next.

Mr. Bucklin, chief engineer, has submitted to me an abstract of all the estimates made for contractors upon the Northern Cross railroad, within the first judicial circuit. This abstract shows the total amount of work done, the amount and prices paid therefor, and the work to be done upon each of the divisions of said road, and by each contractor; which is hereunto annexed, as a part of this report.

That part of the Pekin and Bloomington branch of the Central railroad, situated between Pekin and Tremont, was under contract previous to my last report in June. The grading upon this part of the road was originally let to various contractors, but, by sub-contracts made since, the whole of that work has fallen into the hands of two very enterprising and efficient contractors; and it is expected that said road will be completed by the last of October, in 1839. While upon the subject of this road, it becomes my duty to state that much difficulty is likely to arise in finding suitable rock for bridges and culverts conveniently situated to this line, as well as the whole line of the Central railroad from Bloomington south to the north fork of the Sangamon river. These lines pass over a high and gently rolling country, and their great elevation above the common strata of limestone. None of this article appears even in the deepest valleys of the streams. I would therefore suggest the propriety of adopting either wood or brick for the first construction of the bridges and culverts, which will answer for some years, and until their places can be supplied by a more durable material transported upon the road.

That part of the Northern Cross railroad within the first judicial circuit, situated east of Decatur, has been surveyed and located by the engineer of the eastern district, under the immediate control of the Commissioner of the fourth judicial circuit; and as no report has been made to me in relation to said survey, I cannot render any information to the Board in relation thereto.

That part of the Central railroad, situated in the first judicial circuit, north of Bloomington, has been surveyed and located by General Ran-

som, whose report to me in relation thereto will be found hereunto annexed, to which I refer, as giving all the necessary information.

On the 11th day of August, 1837, having learned that the Fund Commissioners were about to go to the Eastern States, upon the business of this State connected with their duties as Fund Commissioners, I sought and obtained the aid of those gentlemen in purchasing iron, a locomotive, cars, and other necessary articles for the roads in my circuit. At that time I made and delivered to them a letter of authority; a copy of which I hereto annex as a part of this report. Those gentlemen proceeded to purchase railroad iron, cars, a locomotive, and various other articles necessary for the road, a part of which has been received, and the cost of transportation paid by me; but as those gentlemen have not rendered to me any account or statement of the cost, quantities or description of the articles purchased, it is impossible for me to give the necessary information in relation thereto, It is not precisely understood by me, whether those gentlemen, in the purchase of all those articles, acted by virtue of their offices as Fund Commissioners, or under the letter of authority from me. But be that as it may, I have no doubt but all the necessary information in relation to the whole subject, may be had by reference to their report when made, and to the books and records of their office.

The iron received is a good article of the kind, except that the spikes were not of the proper kind, and were made of very bad iron, and consequently was of little value to the contractors. The locomotive received is of the first order; but is heavier than is necessary for the light grades upon the Northern Cross railroad, and is better suited to the Pekin and Bloomington branch of the Central railroad; for which road I understand it was intended: but notwithstanding its weight, it is in successful operation without doing the least injury to the road, or at all deranging its structure.

The next subject about which it becomes necessary for me to report to the Board, is that connected with the improvement of the navigation of the Illinois river.

It will be remembered that all of this river, from its mouth up to the junction with the Sangamon river, was placed under my immediate direction and control. From that time up to the first day of September last, the waters continued so high that it was impracticable to make any satisfactory survey or examination of the channel. About that time the waters fell, and presented a favorable opportunity to examine the obstructions to the navigation. The country along the river, and indeed in the interior to a great extent, then became so sickly that hands could not be procured to make the necessary survey and examinations of said river. With a view, however, of making this survey, I conditionally procured a small steamboat for this service. This boat was found not to answer the purpose, and the money intended to be paid therefor was applied to other parts of the public works, without cost to the State.

Being disappointed in this, I endeavored to procure the necessary information in a different way. I employed skilful persons, and those well informed as to the obstructions to the navigation, to proceed to ex-

amine all the bars, at the lowest water, and then examine and ascertain the depth of water, and the extent and character of the obstructions. The information thus acquired will be found in a statement and description of the obstruction to the navigation of the Illinois river, below the mouth of the Sangamon river, hereto annexed.

It is not pretended that the information thus acquired is entirely correct, but is sufficiently so to enable the Board to determine the probable cost of removing the obstructions, and making the river navigable for steamboats at all stages of water. The material composing all the bars mentioned in this statement is sand and clay, and of such a texture as to be easily removed by a steam dredging machine properly constructed. I would therefore suggest to the Board the propriety of purchasing a machine of that kind for this service, and that the same may be immediately put into operation upon this river. I would further suggest the propriety of employing one competent engineer, experienced in this kind of improvement, to whose charge the whole work upon this stream should be committed.

It is ascertained that this river is one of the most valuable streams for navigation of all the tributaries of the Mississippi, and it is believed that no other improvement would add more value to the country, or confer more general benefits, than the improvement of its navigation. It is therefore very desirable that this should receive the immediate attention of the Board.

The next subject of inquiry for the Board to make of me, as one of its members, is, as to the amount of money expended by me, as Commissioner, upon all and each of the of the public works under my charge. It will be remembered that the appropriations made by the law, in relation to internal improvements, are all special, and only applicable to certain specific objects; yet the same law requires the Board to purchase land for the use of the State, and not necessary to any particular road, and to do other acts and make other expenditures not applicable to any particular portion or division of the improvements of the State. Under these circumstances, the Board of Public Works and the Board of Fund Commissioners constituted a general fund, to be used upon objects not confined to any particular works. Upon this fund I made several drafts; and the money thus drawn was applied to various objects not particularly applicable to any one road.

Out of this fund, all the property was purchased to accommodate the locating parties, and, generally, to carry on the various duties connected with the engineering necessary upon the various works under my charge.

Since the meeting of the Board of Public Works, on the first Monday in this month, I have been requested by the Board of Fund Commissioners to divide and appropriate this fund among the different works and appropriations. In performing this service, I have adopted the rule of dividing this fund, pro rata, between the works, according to the extent of the appropriations, except that the amount paid for property now on hand for the use of the different roads, was charged to the Northern Cross railroad, and, consequently, the proceeds arising from the sale of land property, (if it should become necessary to sell it) should be returned to that appropriation, and a proper allowance made out of the other appropriations to supply the loss consequent upon the use of this property.

The total amount of money expended by me since the commencement of my services, upon all the various roads and parts of the public works under my charge, up to the first Monday of this month, is $230,148 75. The total amount drawn is $229,395 45.

Of the sums thus expended, $19,930 77 has been expended upon the Bloomington and Pekin railroad.

Upon the Alton and Shelbyville railroad, the sum of $4,535 79.

Upon the Central railroad, the sum of $3,550 67½.

Upon the Illinois river, the sum of $100 00.

The residue of said sum, amounting to $202,031 51½, has been expended upon the Northern Cross railroad. In addition to the sum of money expended by me upon the Northern Cross railroad, as aforesaid, there has been paid to the contractors, by special drafts drawn by me for work done upon said road, the sum of $263,625 33.

There has also been paid, by a special draft drawn by me in favor of John J. Hardin, Esq., for and in consideration of a judgment rendered for the right of way for said road over a tract of land, the sum of $2,166 00; making the total amount paid upon this road from the commencement of operations upon the public works, up to the first Monday in this month, the sum of $467,822 84.

In addition to the sum before stated as having been paid upon the Pekin and Bloomington railroad out of money drawn by me, there has been paid by special drafts upon the Fund Commissioners, in favor of contractors, for work done upon said road, the sum of $18,092 00, making the whole sum expended upon that road - $38,022 77.

Upon the Alton and Shelbyville railroad, the sum of	4,535 79
Upon the Central railroad - - -	3,550 67
Upon the Illinois river - - -	100 00

In conclusion, I would say to the Board that the average cost of the several roads in the first circuit must necessarily be greater than the same extent of road further in the interior. This is owing to the fact, that these lines pass through the undulating surface bordering upon the Illinois river, and owing to the fact, too, that the law expressly requires the roads to be located to certain towns and places; to arrive at which it becomes necessary to make deep cuts, raise heavy embankments, and construct costly viaducts; all of which could have been avoided, if the points to which the roads were expressly made to pass had been lesss in number or differently situated.

All of which is respectfully submitted.

M. McCONNEL, *Com'r.*

Copy of a letter of authority given to the Fund Cnmmissioners to purchase iron.

JACKSONVILLE, *Aug.* 11, 1837.

Messrs. MATHER, RAWLINGS, and OAKLEY,
Fund Commissioners of the State of Illinois.

GENTLEMEN: There is now in this district nearly fifty-eight miles of railroad under contract, which will require about sixty-two miles of railroad iron. It is also my intention to put under contract this season that part of the Pekin and Bloomington branch of the Central railroad situated between Pekin, on the Illinois river, and Tremont, probably about ten miles. For this route the iron may be required, (or, at any rate, a part of it,) the coming season; say eleven miles of iron.

In all contracts made and to be made, the State has and will reserve the right to furnish the iron. The kind of iron wanted is of that width and thickness that requires twenty-two tons to the mile, including plates, bolts, and all other things necessary.

You are authorized and requested to furnish the funds and purchase this iron, or to procure it to be imported to the port of New Orleans, subject to the order of M. McConnel, Commissioner of the Board of Public Works of the State of Illinois. It will be necessary to secure the duties upon this iron at New Orleans, to be returned when the iron is laid. If you should believe that iron will decline in price, so that the same may be bought next year for less than at present, you may contract for the delivery of thirty miles, say, six hundred and sixty tons, or thereabouts, as we may not want to use more than that quantity in this district through the next season. In all this you will exercise your discretion.

You will also contract for the building of one locomotive, of the most approved plan, and a suitable number of passenger and burthen cars, to be shipped, *via* New Orleans, to the house of McConnel, Ormsbee, & Co., Naples, Illinois. You, or either of you, are hereby authorized, either by yourselves or agents, to enter into all contracts, and to make all provisions necessary for the procuring of the iron, cars, &c., aforesaid, in as full and complete a manner as I could myself do, as a member of the Board of Public Works for the first judicial circuit; and the funds expended shall be receipted for as expended by me for the use and purposes aforesaid.

With much respect,
I remain, yours, &c.
M. McCONNEL,
Commissioner of the Board of Public Works for the first judicial circuit of the State of Illinois.

Railroad Office, *Manville, Dec.* 3, 1838.

To M. McConnell, *Commissioner of the Board of Public Works.*

Sir: Agreeably to your instructions, I have caused the party engaged in locating the Central railroad from the Illinois river, south, to continue the location of the same as far as Bloomington. The results thus obtained are, I take great pleasure in saying, in all respects as favorable as you had reason to anticipate from the remarks on the preliminary reconnoissance, which I had the honor of communicating to you last summer.

From that survey it was ascertained that a tangent was practicable between the head waters of Cedar creek and the ford-way at the Mackinaw, near Hudson, a distance of about 43 miles. The location has been made along this tangent, which it may be remarked, is nearly on the right line between Bloomington and the termination of the Michigan and Illinois canal, and from one-half to one and a half miles east of the line of exploration. Almost the whole extent of this line is along the Grand prairie, without an obstacle of any kind worthy of notice, except at the Panther, Mackinaw, and Sugar creeks; and those, it will be seen, are easily surmounted. The soil is mostly a rich vegetable mould, varying from one and a half to three feet, with a substratum of compound clay, presenting a surface uncommonly free from undulation, ridges, or objectionable grades in either direction.

From the north line of McLean county to the north branch of Panther creek, a distance of twenty-six and a quarter miles, an almost level prairie is passed over. The distance between this and the south branch is two and a quarter miles, with a continuation in the character of the surface. The valleys of each of these branches are gentle depressions into the surface of the prairie of about thirty feet, and extending about a mile on either side of each stream. The former is somewhat the largest, and will require a bridge of thirty-three feet span and sixteen feet in height, with grades on either side, of nineteen feet per mile, for a short distance. The latter requires a bridge of thirty feet span and twenty feet high, with a bank of about twelve feet in height for eight hundred feet, and grades on either side, not exceeding fifteen feet per mile, for one mile each way. From this stream to Mackinaw creek, a distance of seven miles, a very even though gradual ascending surface intervenes.

Mackinaw creek has here a narrow valley about eighty feet below the general surface of the prairie, with steep irregular bluffs on either side. Our line strikes this creek twenty-six hundred feet above the ford-way, near Hudson, at a point where the bluffs on either side approach unusually near for this stream. These bluffs are composed of a coarse firm sand, of a suitable character to form substantial embankments. A bridge of one hundred feet span and thirty-three feet high, with an embankment on the south side, four hundred feet long and thirty feet high, will give grades on each side, of nearly fifty feet per mile, for a mile each way from the bridge.

This being very much the steepest grade between Cedar creek and Bloomington, it may be preferable to add a few feet to the height of the bridges and embankment, and thus reduce the declivity in the immediate vicinity of this creek. The surface is somewhat broken and irregular, though with the grade mentioned there will be no cuts required that exceed seventeen feet, and these but for a short distance.

The line passes through the principal street in the village of Hudson, which is at an elevation above the Illinois river, at La Salle, of 310 feet, and 51 miles distant from that place. One mile from Hudson we pass the Six-mile creek, a stream of about the same size of the north branch of the Panther creek. The valley is also about the same width and depth, and will consequently require a bridge of the same dimensions as the last stream. A distance of four and a half miles from Hudson we attain the greatest elevation on the line, it being four hundred and fourteen feet above the Illinois and the summit between Six-mile and Sugar creeks.

The grade in ascendidg to this point will require to be about thirty-two feet per mile, for three and a half miles: the southern declivity from this summit is more abrupt, and requires a grade of about thirty-nine feet per mile for one and a half miles. From Six-mile creek to Bloomington the prairie is much more undulating than that north of Mackinaw creek, though no very deep cuts or heavy embankments will be necessary. The only obstacle remaining to be noticed is Sugar-creek, near Bloomington. This is a small stream situated in a valley similar to the south branch of Panther creek. A bridge of thirty feet span and twenty-nine in height, with an embankment nineteen feet high for about one thousand feet will give a grade on either side, of twenty-five feet per mile, for a short distance. The line between Hudson and Bloomington is a tangent, and is believed to be the most favorable location attainable between these places; it terminates in the latter place at a point about twelve hundred feet east of the court-house. As was indicated in my former communication, the character of the surface here will admit of such a change in the line as will best suit its continuation to Decatur, and other purposes at this point.

Stone for bridges and culverts can be obtained at Sandy and Panther creeks, though of rather inferior quality. Timber suitable for the superstructure of the road and in sufficient abundance can be obtained on most of the streams traversed by this line. The lively interest manifested in the progress of this work by the inhabitants along the line seems to offer the best guarantee of its ultimate usefulness to them, and incidentally of its importance to the interests of the State. Indeed the necessity of a more facile and speedy communication to the market, to accommodate the wants and requirements of this healthy and fertile portion of the State, is becoming every day more apparent; and it can hardly be doubted that its great agricultural advantages, in connection with the facilities that will be afforded by this railroad, will very soon draw within its bosom a very dense and wealthy population. A simple inspection of the physical features of this portion of the United States must lead to the conviction that this railroad would be the most convenient and speedy channel of communication for the inhabitants of this region with the distant markets. Recent experience has demonstrated that railroads, as a channel of communication, can be depended upon at all times and at all seasons even in latitudes more rigorous than ours. More than two years since it was computed by an engineer of high standing that, when the railroads which were then projected and in progress were completed, a traveller would be enabled to pass from New York or Boston to Chicago in the space of sixty-one and a quarter hours. Subsequently several important and extensive works have been commenced on this line of communication, shortening the distance materially, and substituting railroads where one or

two changes to steamboats were requisite; by means of which even this estimate must be very much reduced, so much so that it admits of no doubt that, when those works are completed, the journey will be made from Bloomington to Boston, or New York, and back, in a little more than half of the time that is now required to descend the river from Peoria to New Orleans.

I cannot conclude these remarks without expressing my belief that, from the character of the soil and surface over which most of this road passes, the plan of forming a road-bed, on which to place the superstructure, (as is already adopted in some places in the State) is attended with a useless expense of time and money.

When a country is very broken, and the soil is of a nature to make durable and substantial road-ways, this practice may be necessary; but when the soil is a mass of decayed vegetation, and the surface in a great measure already graded by the hand of nature, the circumstances of the case are entirely changed, and their necessity no longer exists. In all high latitudes, whatever may be the soil or surface, it will be admitted that the formation of permanent railroad superstructures should be below the action of the frost. Accordingly these foundations are constructed either upon ruble stones, stone blocks, gravels, piles, or blocks of wood, extending a suitable distance below the surface.

From the difficulty and expense of obtaining other materials, one of the two last methods seems to have the strongest claims to be adopted on the prairies. Over such a surface as these present, I cannot doubt that it will be a great saving of expense to neglect grading or making a road-bed altogether, except over sharp ridges and deep valleys. Upon this plan, the road must be graded upon piles firmly driven into the earth, at a suitable distance from each other, and extending from a few inches to ten feet above the surface,as the case may require. Cross-ties are placed upon the tops of these piles, and a longitudinal rail secured on these, capped with the flat rail of wrought iron; or if the H rail is used, the longitudinal rail of wood becomes unnecessary. A similar superstructure is sometimes placed upon the ends of wooden blocks, planted firmly below the action of the frost. Each of these plans have already passed the ordeal of experience in the Eastern States; and they are found to have every necessary degree of firmness and strength, are more durable than superstructures that are at or upon the surface, and the aggregate expense is moreover evidently much less than with a graded road-bed, since, with this, the same or greater expense for superstructure seems necessary.

The principal advantages of this plan are, to obviate the expense of grading the road-bed and excavating drains and ditches—the necessity of placing the grade line, generally, above the surface, to avoid the water, partially melted snows, and ice, that frequently cover the more level portions of the prairies to a depth of some inches. This alone will amount to a very considerable sum.

Culverts, drains and walls to protect the embankments, will also be unnecessary, as the water will pass freely under the superstructure at all points, except at ridges, and here they are not required—from the difficulty of procuring stone on the prairies. This will also be a very important item in the expense.

The expense of excavating block pits, or driving piles through the embankments, will also be saved. The aggregate of these expenses will ordinarily amount to a sum varying from one-third to one-half of the whole expense of said road; and this amount, it will be seen, must be expended from one to two years before any advantage can be derived from its use; but, upon the plan proposed, as soon as the superstructure is laid, cars may be put in motion, and a benefit realized from the money expended. Should it be determined, ultimately, to form a road-bed and construct culverts and bridges, with stone walls and abutments, it will be seen that this work will be greatly facilitated, and the expense very much reduced, by means of the superstructure already in position; and this may be delayed to such a time as the finances of the State would best permit more expensive structures, or its interests require them. Upon this plan, sharp ridges will of course be excavated, and deep ravines either embanked, or truss work raised to support the rails, as the case may require. Truss bridges, also, to pass the different streams, when durable stone is not easily procured, would not only be a great saving of expense in the first cost, but a work of economy, with a view of ultimately building more permanent structures.

I have thus, sir, in a very hurried and desultory manner, made known to you the principal facts, as well as my views in relation to the work you have placed under my charge will admit of. The accuracy of the latter, I hope more fully to demonstrate when time permits me to present estimates upon different parts of the work.

For the particular distances, elevation, &c., I beg leave to refer you to the accompanying tables. As the field operations have but just been completed, I am not able at this time to exhibit the necessary maps, profiles, and plans pertaining to the work; they are however in progress, and will be transmitted, in due time, by

Your obdient servant,

T. B. RANSOM, *Engineer.*

Table showing the courses, distances, curves, and radii, of the line of the Central railroad, from Baly's point to Bloomington.

No. of stations.	Tangent or curve.	Course.	Distance.	Radius.	Remarks.
End of division—					
To 2,250 - -	Tangent	S. 12° 15' E.	166,920 ft.	-	Tangent course, 502, in division No. 1.
2,250 to 2,292 -	Curve	-	4,200	22,918.368 ft.	To get on best course for crossing Mackinaw.
2,292 to 2,606 -	Tangent	S. 22° 45' E.	31,400	-	Line across Mackinaw.
2,606 to 2,674 -	Curve	-	6,800	22,918.368 ft.	Between Mackinaw creek and Hudson.
2,674 to 3,166 -	Tangent	S. 6° 15' E.	49,200	-	End of survey, Bloomington.

Table showing the elevation of different points, and the intermediate distances on the Central railr'd between Baly's point & Bloomington.

Location.	No. of Stations.	Distance from Ills. river.	Elevation.	Remarks.
	Sta. Feet.			
Summit between the heads of the Big Vermilion and Crow creek - - - - -	1,592	159,200	301.676	
Bed of north arm of Panther creek - - -	1,983 10	198,310	223.571	
Bed of south arm " " - - -	2,117 20	211,720	226.976	In Clark's grove
Deep ravine - - - - -	2,473	247,300	231.745	Bank on either side about 255.000
High water mark of Mackinaw - - -	-	-	205.214	Spring of 1838.
Top bank of river—north side - - -	2,490 70	24,970	207.214	Water in river 70 ft. across in direct line, about 8 in depth.
Surface of the water - - - -	-	-	194.000	November 23, 1838.
Top bank of river—south side - - -	2,492 20	249,220	240.000	Timber on river 2 miles and 1200 feet across.
River bottom - - - - -	-	-	203.000	About 300 feet across bottom.
Broadway street, Hudson - - - -	2,702	270,200	310.614	
Bed of Six-mile creek - - - -	2,763 30	276,330	292.060	Line crosses creek three times. Easily turned.
Summit between Six-mile and Sugar creeks -	2,938	293,800	44.223	Highest ground.
Arm of Sugar creek - - - - -	3,064	306,400	314.059	
2d arm of do. - - - - -	3,086 20	308,620	306.896	Wide ravine.
3d arm of do. - - - - -	3,106 60	310,660	303.448	Creek about 5 across.
Bloomington - - - - -	3,164	316,400	368.461	

Report of James M. Bucklin, Principal Engineer of the Western District.

VANDALIA, *Dec.* 22, 1838.

To M. McCONNEL, *Acting Commissioner of the First Judicial Circuit.*

SIR: I have been desirous of laying before you this winter an estimate of the probable cost of the different lines of road included within the limits of this district, and am enabled to do so through the exertions of Mr. Pollock, my principal assistant, and the gentlemen associated with him. They have, under very discouraging circumstances, completed the preliminary examinations; and to the accompanying report of Mr. Pollock I refer you for a description of them in detail. The estimates deduced from these surveys are designed as approximations; yet, upon a more careful and deliberate examination and a definitive location, many important improvements, conducive to economy and useful effect, which were observed to be practicable during the course of the field operations, can be adopted, and the cost thereby materially lessened. It is remarkable that the different routes examined have not proved more unfavorable, and, indeed, impracticable, within the limits of an ordinary expenditure, taking into consideration the numerous points to which the location of the roads are restricted, without regard to the topographical features of the country, and especially on the lines running at right angles with the direction of the streams.

Could a greater latitude have been allowed in the location between extreme points, the extraordinary advantages afforded by the topographical character of the State, for the economical construction of railroads, would have been rendered available to a much greater extent, and the roads rendered more perfect and effective. The survey of the Pekin and Bloomington branch of the Central railroad under contract between Pekin and Tremont, nine and a half miles, at $9,192 per mile, has been extended to Bloomington, a distance of thirty-six and a half miles. The average cost per mile is estimated at $11,736. The construction of the Peoria and Mackinaw branch and of the Pekin and Bloomington branch of the Central railroad, is impracticable at the maximum rate of graduation fixed by the Board of Public Works. With a grade of 70 feet per mile, however, Peoria can be connected with the Pekin branch within 4.81 miles of Mackinaw, a distance of fifteen miles, at a cost of $8,217 per mile.

The country between Bloomington and Decatur on the route of the Central railroad has been explored; the distance found to be forty-six miles, and the probable cost $14,645 per mile. The crossing of Salt creek renders the graduation of this part of the Central railroad very expensive; several cross sections which were taken off the valley of the stream exhibited a difference of $50,000 in the cost of graduation. A more critical examination is necessary to ascertain the minimum cost of this division of the road, and, before it can be properly determined, the result of the examinations north and south of the western engineering district should be known; for if it is found necessary to employ gradients of more than forty feet to the mile in the graduation of other portions of this road, the same increase in the maximum rate of graduation should be made between this part of it included within the western district; in which event the cost of graduation would be lessened without detracting from the efficiency of the motive power.

The first and second divisions of the Northern Cross railroad, when completed to Springfield, a distance of fifty-six and three quarter miles, will cost $624,250, or $11,000 per mile. The probable cost of the third division is $332,000; the average cost per mile of the three divisions of this road, viz: the first division, extending from Meredosia, on the Illinois river, to Jacksonville, 23.617 miles; second division, from Jacksonville to Springfield, 32.127 miles; and the third division, from Springfield to Decatur, 41½ miles, in all, 98.244 miles, will be $9,750.

During the past season the graduation of the roads under contract in this district have advanced with great rapidity. Between the Illinois and Sangamon rivers, a distance of 63.137 miles, fifty-two and a quarter miles of the graduation of the Northern Cross railroad are completed. The unfinished portions will soon be finished, and large quantities of materials have been and are now being delivered upon the whole line. This work is in such a state of forwardness as to warrant the belief that a locomotive engine will reach Springfield, from the Illinois river, by September, 1839.

On the Pekin and Bloomington branch of the Central railroad, the graduation of that part under contract between Pekin and Tremont is nearly finished, and will probably be completed, and the road put in operation, the ensuing summer. In both of these roads it has been necessary to enlarge the cuts beyond the dimensions prescribed by law. About ten miles of superstructnre has been laid on the first division, beginning at Meredosia. The law of internal improvement restricts the width of track to four feet eight inches between the rails. Obeying the spirit of this law rather than the letter, I have laid the track four feet nine inches, that being the general width of roads in the United Slates. It is worthy of serious inquiry, I think, whether it would not be expedient to increase the width of track still more; say to five feet. There is evidently an advantage in a wide track, laying aside its effects upon the movement of railroad wheels in curvatures: but these effects have been obviated to such a degree, by the proper application of the principle of the cone to the rims of the wheels, and the use of wheels of small diameter, with vibrating axles, that I cannot perceive any objection to the adoption of the five feet track in the construction of our roads, possessing, as they do, so large a proportion of straight line, and few curvatures as small even as fourteen hundred feet radii.

The spikes and connecting plates accompanying the iron purchased for the Northern Cross railroad, were found not to suit; and the expense of altering them has nearly equalled the original cost. Part of the spikes are of a quality not much better than the worst description of cut nails. This lot is now laid aside, as we have fortunately discovered another lot of much superior iron. They should be made of Juniata or Tennessee iron, as it is essential that the most tenacious iron be employed for that purpose. The definitive tracing of the curvatures and tangents on the graded surface, preparatory to laying down the superstructure, and the superintendence of this work, has been confided by me to Mr. George Plant, whose skill and experience, acquired on other roads in the same service, well qualifies him for that duty. I have not been disappointed in my expectations derived from his well known ability. The superstructure as far as it has been completed is as well and as substantially laid as it is possible for a road of this class to be made. It has remained in good adjustment, although heavy loads and an engine weighing ten tons have repeatedly passed over it. In the steepest grades its weight and strength are considerably increased. White oak timber is almost entirely employed; and the plate rail, two inches by one half inch, has consequently every advantage that it can possess to render it secure and immoveable. This description of rail will answer a very good purpose, but it would be better economy in the end to substitute the H rail for it

The order of the Board of Public Works, requiring the change of the maximum grade on the Pekin and Bloomington branch of the Central railroad from fifty to seventy-five feet per mile, was carried into effect, and the cost of grading that part of it between Pekin and Tremont, a distance of 9.47 miles, reduced from $100,297 to $40,297, the average cost of the graduation being now $4,192 per mile, instead of $10,459.

Your instructions of the 16th June, 1838, respecting the location and prepar.

ation for contract of the Naples branch of the Northern Cross railroad, accompanied with an order of the Board, requiring this branch to be located and put under contract, were obeyed, but in pursuance of subsequent instructions received from you, the route designated by you was prepared for contract.

The location of the second division of the Cross railroad, between Jacksonville and Springfield, has been revised and improved, and the distance found to be thirty-three miles and six hundred and seventy feet, which is a little less than by the original location.

In arranging the grades of the roads under construction, great care has been taken in the prairies to elevate the road-bed one or two feet above the surface, and at the same time drain it effectually by means of longitudinal and lateral ditches. In these level plains, which are sometimes saturated with water for weeks together to a considerable depth, I am satisfied, from my own experience, and from the results of experiments which have been made in the construction of other roads in the United States, that the adoption of an effectual system of drainage, from the foundation of the superstructure, is the only means by which its durable and permanent adjustment can be secured without incurring great expense.

In my last report I remarked that it was designed to pass the Sangamon river on a bridge of three hundred feet in length, two spans of one hundred and fifty feet each; since which I have had an opportunity to observe the effects of the stream when high, and have no reason to believe that any greater extent of span is necessary to discharge its waters; but, upon mature deliberation, I have determined to shorten the span of the arches to one hundred feet each, and to place another bridge of one hundred feet span in the bottom between the river and the bluff. The strongest reasons operating in favor of the change are the necessity for shortening the spans of the bridge, produced by want of height in the abutments, and the fact that, whatever may be the peculiar advantages of the mode of constructing a wooden bridge, it is continually operated upon by causes affecting its permanency and durability, the effect of which increases in a ratio with the length of the span and the changes which are produced. The draining of the bottom above the embankment is another inducement; but the shortening of the span, I consider of the greatest importance, affecting the durability and consequent value of the work. By placing more piers in the main channel, the superstructure might have been simplified in its construction, and lessened in its cost; but the foundation of the piers, and the increased quantity of masonry required, would greatly enhance the cost of the bridge; and the obstruction of the piers to the passage of ice and drift would endanger its safety. The present arrangement seems to me to be a proper medium between the objections arising from the adoption of long or short spans at this particular point. Mr. Grubb, the contractor, has laid the foundation of the pier, and delivered a large proportion of the stone required. It will be nearly completed during the ensuing season.

The plan of this bridge and of all important structures of this kind, in the western district, are from the designs of J. & W. Madison, superintendents of carpentry on the Cumberland road. For bridges requiring extraordinary strength, I know of no plan combining so many advantages.

Respectfully, your ob't servant,

J. M. BUCKLIN.

NORTHERN CROSS RAILROAD.

FIRST DIVISION.

Table of Grades from Meredosia to Sangamon river.

Stations from	Stations to	Grade per 100 feet	Grade per mile.		Total.	Total height above the Illinois riv.	Length of plane.	Length of division.
		Feet.	*Feet.*		*Feet.*	*Feet.*	*Feet.*	*Miles.*
15	19	–	–	Level	–	21.270	400	
19	30	.150	7.920	Ascent	1.650	22.920	1,100	
30	31	.172	9.082	"	.172	23.092	100	
31	53	.210	11.088	"	4.620	27.712	2,200	
53	124	.065	3.590	Descent	4.615	23.097	6,900	
124	210	.029	1.531	"	2.494	20.603	8,600	
210	231	.100	5.280	"	2.244	18.459	21.44	
231	232	.028	1.478	"	.028	18.421	100	
232	262	.349	–	Level	–	18.421	3,000	
262	268	.349	18.427	Ascent	2.094	20.515	600	
268	290	.339	17.899	"	7.458	27.973	2,200	
290	322	.420	22.176	"	13.553	41.526	3,227	
322	332	.4437	23.427	"	4.437	45.962	1,000	
332	460	.500	26.400	"	64.000	109.963	12,800	
460	515	.600	31.680	"	33.000	162.963	5,500	
515	539	.670	35.376	"	16.072	159.035	2,400	
539	567	.726	38.333	"	20.112	179.147	2,770	
567	614	.650	34.320	"	30.550	209.667	4,700	
614	636	.300	15.840	"	6.600	216.297	2,200	
636	673	.230	12.144	Descent	8.280	207.117	3,600	
673	720	.130	6.864	"	6.240	200.747	4,800	
720	746.5	.370	19.536	"	9.800	191.377	2,650	
746.5	760	–	–	Level	–	191.377	1,350	
760	844	.760	40.128	Descent	63.840	127.537	8,400	
844	846	–	–	Level	–	127.537	200	
846	911	.760	40.128	"	49.400	176.937	6,500	
911	941	.111	5.860	"	3.330	180.267	3,000	
941	996	.400	21.120	Descent	22.000	158.267	5,500	
996	1011	.100	5.280	Ascent	1.500	159.767	1,500	
1011	1042	.600	31.680	"	178.600	178.367	3,100	
1042	1072	.200	10.560	Descent	6.000	172.367	3,000	
1072	1096	–	–	Level	–	172.367	2,400	
1096	1108	.250	13.200	Descent	3.000	169.367	1,200	
1108	1130	.600	31.680	Ascent	31.200	182.567	2,200	
1130	1133	–	–	Level	–	182.567	300	
1133	1162	.430	22.704	Descent	12.470	170.097	2,900	
1162	1169	.400	21.120	Ascent	2.800	172.897	700	
1169	1185	.0785	4.1448	"	1.256	174.153	1,600	
1185	1200	.250	13.200	"	3.750	177.903	1,500	
1200	1217	.200	10.560	Descent	3.400	174.503	1,700	
1217	1233	.400	21.120	"	6.400	168.103	1,600	
1233	1252	.300	15.840	"	5.700	162.403	1,900	
1252	1257	.200	10.560	Ascent	1.000	163.403	500	
1257	1262	–	–	"	–	163.403	500	
								23.617

NORTHERN CROSS RAILROAD.

SECOND DIVISION.

Table of Grades from Meredosia to Sangamon river—Continued.

Stations from	to	Grade per 100 feet.	Grade per mile.		Total.	Total height above the Illinois riv.	Length of plane.	Length of division.
		Feet.	*Feet.*		*Feet.*	*Feet.*	*Feet.*	*Miles.*
0	2	–	–	Level	–	163.403	200	
2	38	.50	26.400	Ascent	18.00	181.403	3,600	
38	69	.625	32.900	Descent	19,375	162.028	3,100	
69	73	–	–	Level	–	162.028	400	
73	102.5	.625	32.900	Ascent	18.439	180.467	2,950	
102.5	135	–	–	Level	–	180.467	3,250	
135	164	.625	32.900	Ascent	18.125	198.592	2,900	
164	178	.400	21.120	"	5.600	204.192	1,400	
178	200	–	–	Level	–	204.192	2,200	
200	209	.320	16.890	Descent	2.880	201.312	900	
209	246	.380	20.064	Ascent	14.060	215.372	3,700	
246	256	–	–	Level	–	215.372	1,000	
256	276	.400	21.120	Ascent	8.000	223.372	2,000	
276	305	.700	36.960	Descent	20.300	203.072	2,900	
305	308	–	–	Level	–	203.072	300	
308	330	.140	7.392	Ascent	3.080	206.152	2,200	
330	340	.200	10.560	"	2.000	208.152	1,000	
340	353	–	–	Level	–	208.152	1,300	
353	370	.650	34.320	Ascent	11.050	219.202	1,700	
370	430	.150	7.920	"	9.000	228.202	6,000	
430	441	.300	15.840	Descent	3.300	224.902	1,100	
441	451	.160	8.448	Ascent	1.600	226.502	1,000	
451	463.5	700	36.960	Descent	8.750	217.752	1,250	
463.5	466	–	–	Level	–	217.752	250	
466	490	.700	36.960	Ascent	16.800	234.552	2,400	
490	520	–	–	Level	–	234.552	3,000	
520	535	.400	21.120	Descent	6.000	228.552	1,500	
535	540	–	–	Level	–	228.552	500	
540	560	.500	26.400	Ascent	10.000	238.552	2,000	
560	622	–	–	Level	–	238.552	6,200	
622	642	.350	18.480	Descent	7.000	231.552	2,000	
642	676	–	–	Level	–	231.552	3,400	
676	689	.600	31.680	Descent	7.800	223.752	1,300	
689	699	–	–	Level	–	223.752	1,000	
699	711	.600	31.680	Ascent	7.200	230.952	1,200	
711	780	–	–	Level	–	230.952	6,900	
780	807	.100	5.280	Ascent	2.700	233.652	2,700	
807	827	.300	15.840	Descent	6.000	227.652	2,000	
827	858	.300	10.560	Ascent	6.200	233.852	3,100	
858	930	.180	9.504	Descent	12.960	220.892	7,200	
930	1210	.059	3.115	"	16.429	204.316	27,847	
1210	1260	.300	15.840	"	15.000	189.316	5,000	
1260	1295	.225	11.880	Ascent	8.875	197.191	3,500	
1295	1316	.218	11.510	"	4.578	192.613	2,100	
1316	1346	–	–	Level	–	192.613	3,000	
1346	1367	.250	13.200	Descent	5.250	187.363	2,100	
1367	1386	.300	15.840	"	5.700	181.663	1,900	
1386	1406	–	–	Level	–	181.663	2,000	
1406	1456	.040	2.112	Ascent	2.000	183.663	500	
1456	1486	.076	4.012	Descent	2.280	181.383	3,000	
1486	1506	.214	11.299	Ascent	4.280	185.663	2,000	

NORTHERN CROSS RAILROAD.

SECOND DIVISION—Continued.

Table of Grades from Meredosia to Sangamon river—Continued.

Stations from	to	Grade per 100 feet	Grade per mile.		Total.	Total height above the Illinois riv.	Length of plane.	Length of division.
		Feet.	*Feet.*		*Feet.*	*Feet.*	*Feet.*	*Miles.*
1506	1521	.226	11.933	Descent	3.390	182.273	1,500	
1521	1550.5	.400	21.120	"	11.800	170.473	2,950	
1550.5	1576	.360	19.008	Ascent	9.180	179.653	2,550	
1576	1590	.040	2.112	Descent	.560	179.093	1,400	
1590	1616	.240	12.672	Ascent	6.240	185.333	2,600	
1616	1661	.240	12.672	Descent	10.800	174.533	4,500	
1661	1676	–	–	Level	–	174.533	1,500	
1676	1709	.080	4.224	Ascent	2.640	177.173	3,300	
1709	1726	.250	13.200	Descent	4.250	172.923	1,700	
1726	1749	.200	10.560	"	4.600	168.323	2,400	
1749	1773	.238	12.566	Ascent	5.712	174.035	2,400	
1773	1775	.043	2.270	"	.086	174.121	200	
								33.127

THIRD DIVISION.

1775	1776	.043	2.270	Ascent	.043	174.164	100	
1776	1791	.323	17.054	"	4.845	179.009	1,500	
1791	1800	.238	12.566	"	2.142	181.151	900	
1800	1828	–	–	Level	–	181.151	2,800	
1828	1848	.300	15.840	Descent	6.000	175.151	2,000	
1848	1868	.150	7.920	"	3.000	172.151	2,000	
1868	1888	.070	3.696	"	1.400	170.751	2,000	
1888	1898	.150	7.920	"	1.500	169.251	1,000	
1898	1927	.350	18.482	"	10.150	159.101	2,900	
1927	1949	.260	13.728	Ascent	5.720	164.821	2,200	
1949	1984	.046	24.28	"	1.610	166.431	3,500	
1984	2011	.165	8.712	Descent	4.455	161.976	2,700	
2011	2088	.755	39.864	"	58.135	103.841	7,700	
2088	2111	.152	8.025	Ascent	3.496	107.337	2,300	
Bottom of Sangamon river			-	–	–	85.753	–	6.363
Total to Sangamon river			-	-	–	–	–	63.107

Copy of a report from Mr. Parker.

WESTERN DIVISION, NORTHERN CROSS RAILROAD,
Illinois, August 11, 1838.

To MURRAY MCCONNEL, Esq.
Commissioner Board of Public Works.

SIR: In conformity with the 12th section of the Internal Improvement law, I have the honor to present to you, and to the Board of Public Works, the following report.

In a communication from you, dated 11th June last, informing me that the three miles of the Northern Cross railroad, running west from the Illinois river, were ordered to be put under contract, I was instructed to locate the same and prepare it for contractors by the 13th of the present month.

The reconnoissance of the country last fall being more general in its character, and indefinite as to the most feasible route for the location, I deemed it highly important to enter upon a re-examination of the country at the points in the route presenting the most serious obstacles. Accordingly, an engineering corps was organized, and placed under the direction of Mr. Egbert Dewey, assistant engineer, who proceeded, with instructions, to the place designated for the commencement of our field operations.

The principal difficulties to be overcome were either by ascending from the bottom to the table lands above, through short and abrupt ravines, and consequently by adopting steep grades, or traversing the valley of a winding stream, with lower grades and short radii of curviture. After patient investigation of this matter, and expeditious experiment, dictated by a desire to consult the "most rigid economy" in a close comparison of the cost of construction, as well as the vertical and horizontal direction of the different trial lines, I was enabled to decide to my entire satisfaction upon the one combining the most desirable advantages. I am also satisfied, after comparing opinions with those who had more immediately the direction of the original examination, that theirs agree with mine in every important particular relating to the location.

A report having been submitted by Mr. H. P. Woodworth, including the western division of the Northern Cross railroad, it was my province, here, to make reference to that report for a description of the original surveys, and proceed to consider the more recent explanations and amendments.

First. As one of the prominent objections to the route first examined was between the town of Versailles and Mount Sterling, about two miles from the former place, the review was commenced near Versailles and run in a northwesterly direction, varying in all places when it was thought advisable, in order to make any easy graduation with less expense. Along this line, the country, for a short distance is considerably undulating, presenting, perhaps, more prominent features than any other section on this route; but on entering into a geological examination of it, there were found no material objections, it being formed of a loose earth and easily removed.

Second. A line was run from the northern or Camp creek route, commencing at a point near the mill of Cornelius Vandeventer, esq. ascending the bluff through a small ravine, and intersecting the first named or central line one mile northwest of Versailles. This was found much too steep and winding to admit of the location for a useful line of road.

Third. A route was examined diverging from the Camp creek line, about four miles further north, up said creek, and intersecting the central line on the ridge two and a half miles northwest of Versailles; this line was also found objectionable on account of its windings, linear extent, and abrupt gradients.

Many other lines were carefully and instrumentally examined, which presented insurmountable difficulties; and at length a re-examination was instituted along the original survey of Camp creek, with a view, if possible, of cuting the points of the hills, and thereby diminishing the resistance which would be caused by the abruptness of the curves. This, however, was attended with but little success, as the line was frequently interrupted by bold and rocky prominences in the windings of the valley, and by constant changes of direction.

Independent of the objections offered to this line on account of its serpentine course, it was found two and three-fourth miles farther in its linear extent than any other line examined It was also found subject to inundation at high stages of water, and that it would be necessary to raise an embankment on the creek bottom for nearly the whole extent of the route, and (where it would not exceed the expense of making new channels for the stream) it would require many small bridges or extensive culverts.

Bearing in mind some of the main objects of the proposed work, I deemed it my duty, so far as practicable, to make a choice for the location of the road which would be the most economical in its construction and embrace the advantages of speedy conveyance, the accommodation of the inhabitants, and the general development of the resources of the country along the route: also, taking into consideration its prospective usefulness, it was my wish to determine upon a route, the graduation of which could be arranged with a view to accommodate an increase of trade and an easy transportation. Accordingly, a line was commenced on the bank, at a point opposite the termination of the road on the eastern side of the Illinois river, and run across the river bottom, north, about 62° west, to the mouth of a ravine near Mr. Henry Hambaugh's residence; thence up this ravine to Versailles, situated on the south half of section seventeen, in township two south, and in range two west; making an extent of line from the river bank to Versailles of 6.50 miles. From this place the line passes in a northwesterly direction over some of the breaks or undulations, first above noticed, at the heads of the small streams running into Camp creek on the northeast, and M'Kee's creek on the southwest, for about two miles; thence, by passing along on the ridge dividing the waters of the above mentioned streams, with easy grades and slight curves, it reaches Mt. Sterling, pleasantly situated on an eminence in the prairie, 15.89 miles from the Illinois river, on the northeast quarter of section seventeen, in township one

south of the base line, and in range three west of the fourth principal meridian.

In making a selection for this division of the road, I am fully convinced, by various researches and personal obervation, that a more direct and more eligible route could not have been chosen between the two points.

As to the general features of the country along this line, there is nothing peculiarly striking in its topography, or remarkably interesting in its geological formation. The undulating timber lands on the river bluffs, the extended bottom and prairie lands on the margin of the Illinois and in the interior, and its peculiar adaptation to agriculture, together with the good quality and great quantity of material, such as rock and timber, situated immediately on the route, were important considerations in making a selection, and are valuable inducements for the future progress of this line of the public improvement.

The climate is healthful; the inhabitants are already numerous and increasing. A desire for improvement seems to be awakened in the vicinity of the work, and new signs of enterprise are daily visible in the cultivation of the soil and in the abundant increase of agricultural products.

The lands in the vicinity of the road are estimated at great value; notwithstanding which, I can cheerfully acknowledge the liberality of the inhabitants in throwing open their fields, and relinquishing to the State, free of cost, a sufficient quantity for the construction and future use of the road.

The inhabitants of Mt. Sterling and Versailles, flourishing villages in the interior, affording to the adjacent population their necessary supplies of merchandize, anticipated the extension of this railroad as forming a connecting link between the Mississippi and Illinois rivers; and that its intersection with other portions of the public works would greatly facilitate the interchange of commodities and the communication by travelling. It was ascertained by observations at the bluff, and on the river bank by marks on the trees and otherwise, that the water from the Illinois river, at its highest stage, inundated the bottom to a considerable depth, and that it would be necessary to raise the road-bed to the average height of about seven feet across the bottom. After estimating various plans for the substructure of this part of the road, it was thought best and cheapest to throw up an embankment, above high water mark, with broad slopes and a sufficient number of sluices bound by protection walls. This, well lined with brush, confined by the earth-work, will protect the embankment from washing, and give vegetation a chance to take root, which will soon form a protection to the slopes. In crossing the bottom at right angles with the line of the river bank, it will be necessary to adopt a level grade, in order to preserve uniformity of road-bed above the water level.

This line from the river bank, being horizontally and vertically of one direction, will form a beautiful as well as useful portion of the road, and when completed as it is contemplated, I hesitate not to say, will be as durable as any portion of the work. As the resistance in the transit of the line through the river bluffs will be the greatest in this division, and indeed will require the extent of the power necessary between Quincy and the Illinois river, it is well to remark that the maximum

grade will be 70 feet to the mile, the minimum radius of curvitures, 1,142 feet.

The present graduation of this work, from the bluffs to Mt. Sterling, was surveyed in great haste, and it is not improbable that it may be much improved. The operations of the field have been hurried, in order to perform its duties or make the necessary examinations before the time appointed for the letting to contractors; and it gives me much pleasure publicly to bear testimony to the fidelity and industry with which the duties of the field have been discharged.

An exhibit of quantities and the cost of construction, together with a table of grades and curves upon the whole line, are hereto annexed; also, detailed drawings of the formation of the road-bed, masonry, &c., with written specifications, in which the same are to be executed, accompanying the maps herewith returned. All are most respectfully submitted by

Your obedient servant,
AMASA R. PARKER, *Resident Engineer.*

An exhibit of the cost of grading so much of the Northern Cross railroad as lies between the Illinois river and Mt. Sterling, in Schuyler county, it being divided into fifteen sections, as follows:

Section No. 50,	63,755 cubic yards embankment, at 18 cts	$11,475 90
49,	81,835 cubic yards embankment, at 17 cts	13,911 95
48,	52,293 cubic yards embankment, at 18 cts	9,412 74
Grubbing and clearing on river bank - -		150 00
Total - - - -		34,950 59

August 15, 1838. The contract price for the above three sections will exceed $40,000.

Section No. 47—5,300 *feet.*

16,560 cubic yards embankment, at 15 cents -	$2,484 00
1,652 cubic yards excavation, at 14 cents -	231 28
83 cubic yards masonry in culverts, at $4 50 -	373 50
Grubbing and clearing - - -	250 00
Total - - - -	3,338 78

Section No. 46—4,700 *feet.*

46,695 cubic yards embankment, at 15 cents -	$7,004 25
1,722 cubic yards excavation, at 14 cents -	241 08
151 cubic yards masonry in culverts, at $4 00 -	604 00
Grubbing and clearing - - -	250 00
Total - - - -	8,099 33

Section No. 45—6,100 feet.

37,392 cubic yards embankment, at 15 cents -	$5,608 80
76,125 cubic yards excavation, at 14 cents -	10,657 50
171 cubic yards masonry in culverts, at $3 50 -	598 50
Grubbing and clearing - - -	200 00
Total - - - -	17,064 80

Section No. 44—5,400 feet.

30,031 cubic yards embankment, at 15 cents -	$4,504 65
23,158 cubic yards excavation, at 13 cents -	3,010 54
232 cubic yards masonry in culverts, at $3 50 -	812 00
Grubbing and clearing - -	250 00
Total - - - -	8,577 19

Section No. 43—4,900 feet.

49,173 cubic yards embankment, at 15 cents -	$7,375 95
42,848 cubic yards excavation, at 14 cents -	5,998 72
190 cubic yards masonry in culverts, at $4 00 -	760 00
Grubbing and clearing - - -	150 00
Total - - - -	14,284 67

Section No. 42—4,700 feet.

19,876 cubic yards embankment, at 14 cents -	$2,782 64
21,138 cubic yards excavation, at 14 cents -	2,959 32
75 cubic yards masonry in stone drains, $4 00	175 50
Grubbing and clearing - - -	150 00
Total - - - -	6,191 96

Section No. 41—6,000 feet.

12,066 cubic yards embankment, at 15 cents -	$1,800 90
289 cubic yards excavation, at 14 cents -	40 46
39 cubic yards masonry in stone drains, at $4 50	175 50
Grubbing and clearing - - -	250 00
Total - - - -	2,266 86

Section No. 40—5,000 feet.

8,602 cubic yards embankment, at 16 cents -	$1,376 32
513 cubic yards excavation, at 14 cents -	71 82
14 cubic yards masonry in stone drains, at $4 50	63 00
Grubbing and clearing - - -	250 00
Total - - -	1,761 14

Section No. 39—5,600 *feet.*

8,604 cubic yards embankment, at 15 cents -	$1,290 60
681 cubic yards excavation, at 15 cents -	102 15
44 cubic yards masonry in stone drains, at $4 50	198 00
Grubbing and clearing - - -	300 00
Total - - - -	1,890 75

Section No. 38—5,200 *feet.*

2,726 cubic yards embankment, at 16 cents -	$436 16
5,567 cubic yards excavation, at 14 cents -	779 38
14 cubic yards masonry in stone drains, at $4 50	63 00
Grubbing and clearing - - -	250 00
Total - - - -	1,528 54

Section No. 37—5,200 *feet.*

5,751 cubic yards embankment, at 15 cents -	$862 65
2,582 cubic yards excavation, at 14 cents -	361 48
47 cubic yards masonry in stone drains, at $4 50	211 50
Grubbing and clearing - - -	150 00
Total - - - -	1,585 63

Section No. 36—4,500 *feet.*

3,384 cubic yards embankment, at 14 cents -	$473 76
4,434 cubic yards excavation, at 14 cents -	620 76
29 cubic yards masonry in stone drains, at $4 00	116 00
Total - - - -	1,210 52

Making the average cost per mile, from Illinois river to Mt. Sterling, $6,472 67; or from the river bluffs to Mt. Sterling, $5,710 20.

A Table of Grades.

No. of grades.	Direction.	Inclination per mile.	Elevation or depression.	Elevation above Illinois river.	Length of each grade.	Distance from Illinois river.	Localities.
		Feet.	*Feet.*	*Feet.*	*Feet.*	*Miles. Feet.*	
1	Level	–	–	16.20	20,400	3 4,560	River bottom.
2	Ascending	51.82	52.03	68.22	5,300	4 4,580	River bluff.
3	"	70.00	114.01	182.23	8,600	6 2,620	Versailles.
4	"	3.75	4.77	187.00	6,700	7 4,040	
5	"	33.79	16.00	203.00	2,500	8 1,260	
6	Descending	15.60	6.50	196.50	2,200	8 3,460	
7	Ascending	39.60	31.50	228.00	4,200	9 2,380	Heads of Camp and
8	"	3.16	.36	228.36	600	9 2,980	M'Kee's creeks.
9	"	18.48	17.50	248.50	5,000	11 1,820	
10	"	11.88	900	257.50	4,000	12 540	
11	"	1.55	100	258.50	3,400	12 3,940	
12	"	18.23	1450	273.00	4,200	13 2,680	
13	Descending	3.10	200	271.00	3,400	14 980	
14	Ascending	5.94	10.125	281.125	900	15 4,700	Mt. Sterling.

Copy of a communication from the President of the Jacksonville and Naples Railroad Company.

To Murray McConnel, Esq.,
Commissioner, &c.

Jacksonville, *July* 24, 1838.

Dear Sir: Since the meeting of the Commissioners of the Board of Public Works at Vandalia, when they ordered a construction of a lateral road to the town of Naples from the main line of the Northern Cross railroad, I have learned that the engineers in your employ have surveyed several lines passing in different directions from said main line to the town of Naples and Columbus; from which I infer that said engineers are seeking for the shortest and cheapest route from any part of said road to the town of Naples, in the same manner and upon the same principles that they would do if the Naples and Jacksonville Railroad Company did no texist, and had not constructed a road, under their chartered rights, for nearly four miles. Under present circumstances, I deem it my duty, in behalf of said Railroad Company, to inform you that there exists a chartered grant from the Legislature of the State, to the Naples and Jacksonville Railroad Company, to make a railroad from the Illinois river at Naples, through Wolf run, to the town of Jacksonville; that said company have expended nearly twenty thousand dollars in the construction of a part of said road. No part of the chartered rights of said company has been surrendered to the State; and by reference to the internal improvement law upon that subject, it is not made your duty to attempt to procure a surrender of the charter of said company to the State, nor would said company, in justice to itself, have granted your request had you so attempted. You will see that, under the circumstances surrounding this case, it becomes important that the State should pursue a course not inconsistent

with our rights and interests acquired from the State, as well upon principles of justice to us as of economy on its part. I hold that the law is well settled that the State cannot make a road over our chartered route without our consent, or upon any principle, ancient or modern, without, at least, paying all damages that may arise from such an act. It is equally true that the State cannot construct a road from Meredosia to Jacksonville, though it should avoid the immediate route named in our charter, and thereby render our chartered rights of no avail, without the consent of the company, or the payment of damages as aforesaid. All these questions have been fully settled by the Supreme Court of the United States, and by other high judicial tribunals of the country.

I contend, in behalf of the company, and we shall put ourselves in this legal po sition, that, in any event, whether a lateral branch be made by the State to Naples or not, the State must pay for our road and all damages, or abandon making a road on this route itself.

The question then presents itself to you and your engineers, whether it would be best for the State to pay for the work we have already done, and throw it away, or, having paid for it, to use it for the purposes and benefit of the State. There is one other fact which I deem it my duty to make known, and at this stage of the proceedings, and that is, that the State is already occupying more than fifteen miles of the route expressly named in our charter, and above seven miles of the private landed property of the stockholders of said company.

Having communicated these facts and intimated our intentions, and referred to the principles of law that govern the matter, we leave the question with you and your engineers, not doubting that you will see what is the interest of the State, and, seeing it, will not fail to act accordingly.

Now, we propose to surrender all our rights as a chartered company, if the State will take and complete our road, and pay us for the work done at what it is worth. In addition to the general principles of law that govern in this case, it is expressly provided in our charter that the State shall not take away our chartered privileges without first paying all costs and expenses, interest, and damages.

I am, very respectfully, yours, &c.

MIRON LESLIE,

President of the Naples and Jacksonville Railroad Company.

A statement and description of the obstructions to the navigation of the Illinois river below the mouth of the Sangamon river; and amount of cubic yards of excavation in each bar, from the mouth of the Illinois river to the mouth of the Sangamon river.

The first bar in the Illinois river, being six miles from the mouth of the river, is called Six-mile bar. When the Illinois and Mississippi rivers are both low, the water is twenty-eight inches deep in the channel. To cut a channel through this bar one hundred and fifty feet wide, so as to make it contain four feet water in depth at its lowest stage, it will be necessary to excavate 1,371 cubic yards of earth from the bottom of the river.

French bar is twenty-four miles from the mouth of the river, is one hundred and fifty feet wide, has twenty-eight inches of water upon it at the lowest stage; and will require, to make the proposed channel one hundred and fifty feet wide, 1,371 cubic yards excavation.

Hurricane Island bar is thirty miles from the mouth of the river, is one thousand three hundred and twenty feet wide, and has thirty-nine inches of water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 7,332 cubic yards excavation.

Apple Creek bar is forty-two miles from the mouth of the river, is three hundred feet wide, and has twenty-seven inches of water at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide, 3,333 cubic yards excavation.

Otwell bar is forty-five miles from the mouth of the river, is two thousand six hundred and forty feet wide, and has but two feet water upon it at the lowest stage, and is considered one of the worst bars in the river; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 31,556 cubic yards excavation.

Steward's Point bar is forty-eight miles from the mouth of the river, is four hundred and fifty feet wide, and has twenty-eight inches water upon it at the lowest stage; and will require. to make the channel one hundred and fifty feet wide and four feet deep, 3,333 cubic yards excavation.

Grand Pass bar is forty-nine miles from the mouth of the river, and is four hundred and fifty feet wide, and has thirty inches water upon it at the lowest stage; and will require, to make the channel one hundred and fifty feet wide and four feet deep, 3,794 cubic yards excavation.

Cooper's Island bar is fifty-one miles from the mouth of the river, and is six hundred feet wide, and has thirty inches water upon it at the lowest stage; and will require, to make the channel one hundred and fifty feet wide and four feet deep, 6,666 cubic yards excavation.

Bridgeport bar is fifty-two and a half miles from the mouth, and is one hundred and fifty feet wide, has three and a half feet water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 416 cubic yards excavation.

Little Blue bar is fifty-eight and a half miles above the mouth of the river, is sixty feet wide, and has thirty inches water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 167 cubic yards excavation.

Berington's bar is sixty-two miles above the mouth of ithe river, is three hundred feet wide, and has twenty-four inches of water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 6,666 cubic yards excavation.

Big Blue bar is sixty-three milles above the mouth of the river, is sixty feet wide, and has twenty-four inches of water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 666 cubic yards excavation.

Naples flats are sixty-eight miles from the mouth of the river, have about thirty inches of water upon the bar at the lowest stage. They extend two miles in length, and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 29,333 cubic yards excavation.

McGee's Creek bar is seventy miles above the mouth of the river, is six hundred feet wide, and has thirty-three inches of water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 1,667 cubic yards excavation.

Meredosia bar is seventy-three and a half miles above the mouth of the river, is six hundred feet wide, and has thirty inches of water upon it at the lowest stage; and will require, to make the proper chanel one hundred and fifty feet wide and four feet deep, 1,667 cubic yards excavation.

Moore's bar is eighty miles above the mouth of the river, is four hundred and fifty feet wide, and has twenty-eight inches water at the lowest stage; and will require, to make the channel one hundred and fifty feet wide and four feet deep, 5,000 cubic yards excavation.

Beardstown bar is ninety-two and a half miles above the mouth of the river, and is commonly called "Crooked Creek bar," is four hundred and fifty feet wide, and has fifteen inches of water upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 7,500 cubic yards excavation.

Sugar Creek bar is one hundred and one miles above the mouth of the river, is three hundred feet wide, and has twenty-eight inches upon it at the lowest stage; and will require, to make the proper channel one hundred and fifty feet wide and four feet deep, 6,666 cubic yards excavation.

Total amount of excavation upon the several bars from the mouth of the Illinois river to the mouth of the Sangamon river, a distance of one hundred and one miles.

	Cubic y'ds excava.
Six-mile Island bar	1,371
French bar	1,371
Hurricane Island bar	7,332
Apple Creek bar	3,333
Otwell bar	31,556
Steward's Point bar	3,333
Grand Pass bar	3,794
Cooper's Island bar	6,666
Bridgeport bar	416
Little Blue bar	167
Berington bar	6,666
Big Blue bar	666
Naples Flats bar	29,333
McGee's Creek bar	1,667
Meredosia bar	1,667
Moore's bar	5,000
Beardstown bar	7,500
Sugar Creek bar	6,666
Total amount of cubic yards of excavation necessary to remove all the bars	118,504

118,504 cubic yards, at 50 cents per yard	$59,252 00
Contingencies, ten per cent	6,825 00
Total amount	66,077 00

Report of A. R. Parker, R. E.

WESTERN DIVISION, NORTHERN CROSS RAILROAD,
Illinois, November 30, 1838.

TO MURRAY M'CONNEL, ESQ.,
Commissioner of the Board of Public Works.

SIR: In compliance with your instructions for me to furnish the Board of Public Works with a map and profile of the western division of the Northern Cross railroad, accompanied by a brief statement of the progress of the work, and the amount of money expended in the execution of the same, the following is respectfully submitted.

Those portions of the improvement lying between Quincy and Columbus, and also upon the Illinois bottom, have been under successful operation since they were respectively placed under contract; and the workmanship of the same evidences, most substantially, the ability and skill of the contractors. The work has been under the immediate direction of the assistant engineers, Mr. James Oakey, at Quincy, and Mr. Egbert Dewey, at Versailles, who have, from time, received and executed my instructions.

The whole amount of money estimated to be paid to contractors during the progress of grading the Quincy division, as reported at this date, is $24,661 46. Reference being made to tables exhibiting, in detail, the quantities and amount of work to be done, it is thought unnecessary to embody them in this report.

The Illinois bottom being subjected annually to inundation by the high stages of water in the river, and as there is a prospect of being compelled soon to abandon operations upon the river bank, in consequence of a wet season, I would respectfully recommend that the Board of Public Works take into consideration the expediency of ordering so much of the road to be placed immediately under contract as will include the heavy work in the Illinois bluffs. This, if awarded to the contractors who are now engaged at the river, would enable them to retain their present force during the high stages of water in the winter and spring.

For a general description of the character of the work between the bluffs and Mt. Sterling, reference is made to my former report on the location.

There being much anxiety and speculation in relation to the cost of the whole work between the Illinois river and Quincy, a few words may suffice to give some desired information upon this subject. As the cost has been estimated and reported, and reference made to these reports for that kind of information, I will merely state that the average cost, per mile, for grading 54 miles, will probably not exceed $4,300.

This line passing, as it does, over a level prairie, for nearly thirty miles, can be graded at a trifling expense. Some slight variations in the horizontal and vertical position of the present line may much diminish the cost of grading.

At the close of the report, above presented, it may not be inappropriate to detail some of the advantages arising to the country, and to take a single glance at the position it will occupy in the final establishment of of railway communication.

All classes of society are measureably affected in establishing a means of conveyance throughout the country, which is of the kind so economical in its construction, and which, when once established, will be so easy, safe, and expeditious. It is an improvement furnishing a facility for the introduction of all kinds of produce from distant sections of the country, which never before found way to market on account of the difficult means for the transportation, and for bringing immediately into cultivation the vast extent of prairie in the vicinity of the road, which, on account of its remote situation and want of proper communication, has been long neglected. The inhabitants settling in the interior are induced to retire to the groves and forests, leaving the wide field of enterprise unoccupied and unimproved. Therefore, the slightest inducement for the settlement of so extensive a territory, of the richest soil, is entitled to consideration.

The increase of travel, both westwardly and eastwardly, within the last few years, has maintained a line of coaches through the neighborhood of the road, and has greatly augmented the profits to the proprietors. The great delay of merchandize, as well as passengers, on account of the low stage of water in the navigable streams, costing both time and money, has reduced the country to actual want; and all due consideration should be given to any plan which proposes a remedy for a tried grievance. The object here contemplated may be urged for the establishment of any portion of the proposed improvement. The facility of moving with great rapidity from one section to another, shows how the energies of a country may be concentrated. Distance may be properly estimated by the time required in traversing it; and the time spent by men of business, in travelling from one place to another, is lost, because it is turned to no profitable account. Thus, Jacksonville may be said to be twenty-four hours from Quincy, or Quincy thirty hours from Springfield; but as twenty miles an hour have been found attainable, (and indeed sixty miles an hour have already been performed on a portion of this road,) Jacksonville would be only four hours from Quincy, or Quincy six hours from Springfield. So, on a moderate calculation, what is now considered two long days' journey, (the time not unfrequently spent in performing it,) may be converted into a pleasant mornings' excursion; and the citizen may perform a journey to either of the above places, transact his business, and return the same day, without consuming more than one-fourth the time usually spent by the ordinary mode of travelling.

The importance, to a commercial town, of an easy, safe and expeditious mode of transit for merchandize, will be readily acknowledged.

The minimum amount of goods sold in the town of Quincy, during the year ending 30th November, 1838, is $289,000; most of which have been transported from the eastern market, via New Orleans, or the Ohio river, subjected to great delays and much risk. These, according to the statements of the merchants themselves, have not satisfied the demands of the country. The low stage of water, and the delays incidental to river navigation, presented a serious obstacle to the progress of trade. This town affords many other sources of trade and profit. The lumbering establishments, which were not extensive enough to supply the town and surrounding country, average a sale of $102,000 annually. These,

however, have furnished material for the erection of some extensive warehouses, as well as many of the first order of public and private dwellings. There is also an extensive flouring establishment which manufactures $60,000 worth of flour annually; seven-eighths of the wheat thus manufactured is transported from the country by private conveyances. In speaking of the mercantile, mechanical, and other business transactions of this enterprising town, I believe I can add, without exaggeration, that Quincy is one of the most pleasant towns on the banks of the Mississippi; and, according to the recent numerical estimate, is unequalled in increase of population by any other in the State, while, in beauty of location, it surpasses any other in the west. The surrounding country, including the ground upon which the town stands, is of an undulating surface, of the richest and most productive soil. The streets cross at right angles. In the centre is a public square, surrounded by the Quincy house, the court house, and many other public buildings, exhibiting some of the best specimens of modern architecture. This town being at the western termination of this important thoroughfare may, as also for its commercial advantages, be considered one of importance.

Amongst the widely diffused benefits to be derived from the improvements at large, must be enumerated, in no inconsiderable degree, the commercial prosperity of the western country. The energies of that class of people that are settling upon her lands, rearing her country villages, and taking a prominent stand in her trade and manufactures, will be invigorated; while every article in her agricultural industry will experience an increased demand, from the cheapness and facility with which it will be introduced into market. The inhabitants at large will reap their share of direct and immediate benefit. The hidden resources of the country will be developed. Coal having been discovered nearly in the direct line of the railroad, having no other access to market than by private conveyance, may soon be afforded in great abundance, at reduced prices.

The public mind seems to be emerging from embarrassments in relation to the utility of the proposed work, and confidence maintained, from a more thorough knowledge of the demands of the country. The march of improvement and the tide of emigration are unceasing, and seem to be irresistible, affording new and increasing encouragement for the construction of roads and canals, and for the enlargement of the channels of navigation. The prospects of the country brighten as the light of the morning successfully unfolds its beauty, and as science and the arts, and the theatre of mechanical invention, assume a place in the great valley of the west.

Nearly two centuries have elapsed since the first partial invention of railroads. The plan first adopted was a simple construction of wood, at a trifling investment of capital and a much less expenditure of scientific arrangement. The plan was gradually improved, until, finally, the substitution of iron for wood was found preferable, being both more useful and economical. The form and size of the rail, for a long time, remained objectionable, until the edge rail was finally adopted, to answer the design.

The first successful application to Parliament, for the establishment of a railroad upon a more extensive scale, was made in the year 1823. The subscribers to this undertaking encountered a long and strenuous opposition. The land-holders whose property was affected, and the coal proprietors whose pecuniary interests were concerned, repeatedly placed their injunction upon its passage. This road was twenty miles long, consisting of a single track, with *sidings*, to admit cars to pass one another. This work afforded a large profit, and was principally used in conveyance of coal. Thus, by repeated applications of steam motive power to railway carriages, the public mind became confirmed in the belief of its adaptation to the principle of conveyance.

Some of the most enterprising men having witnessed the powers of the locomotive engine, and conceiving that it might be successfully employed on a railway for commercial purposes, took measures for its establishment as a means of transportation between Liverpool and Manchester. A survey was prosecuted, and a guarantee offered for the estimated cost of the work. Public announcement was made of the objects of the scheme, and the nature of the undertaking; and petitions, the most supplicatory, were signed for the sanction of the legislature. Session after session was exhausted in scrutinizing and discussing the merits of the bill. Favors were asked and refused—repeated, and rejected. The opposers of the measure appeared determined, at all hazards, to put down so intolerable an innovation on "established modes and vested rights." Some, whose estates the road crossed, contended that the sanctity of their domains would be invaded, and the privacy of their residences destroyed, by thus bringing into their neighborhood a public highway, with all the varied traffic of coals and merchandize. But in looking at the immense trade which would be created between the two towns, in consequence of the undertaking, the proprietors were resolved to renew the overture. The importance of the work seemed to them self-evident, and, for the interest of the country, imperiously required. After four years of conflict and contention, the heat of parties exhausted itself, and the bill was passed. Doubtless the history of this stupendous work is better known by those who, perchance, may read this article, than so concise a view can disclose. It is an enduring example of human perseverance, ingenuity, and enterprize. This work, costing as it did, together with its appendages, the sum of £800,000, for a line of only thirty-one miles, might seem an unwarrantable expenditure; but the immense traffic created in consequence of its construction justifies the outlay. "If we look for the construction of one hundred railroads equal in extent to the Liverpool and Manchester, comprising a line of three thousand miles, in various situations, and absorbing a capital of fifty or sixty millions of pounds sterling, what a source of occupation to the laboring community; what a change in the facility of giving employment to capital, and consequently to the value of money!"

Reverting again to our own country, where industry "in its varied channels of business and enterprise," and where health and prosperity are so signally prevalent, when contrasted in its natural resources with those of foreign countries, we can but hope for it a future happy destiny: and to the west we not only look as to the great natural granary of the union, and the establishment of internal communication of paramount

importance, as the means of affording the facility of intercourse and conveyance; but in a neglect of the same as the neglect of a bold and judicious application of mechanical science, and the abandonment of her career of improvement as a rejection of the means of aggrandizement, which other nations have successfully adopted.

But the spirit of the times and the progress of events seem to demand new energies in all the departments of business. We look forward to the approach of the period when the calculations of the merchant, or the speculation of the political economist, shall be deemed more consistent with science, literature, and the arts—and all shall be enlisted to cultivate the highest state of wealth and civilization—the improvement and well being of the whole community.

Statistics for the Quincy and Columbus division of the Northern Cross Railroad.

Quantities for the first six sections from the Mississippi—

138,323	cubic yards of earth removed, at 14½ cents	$20,121 12
442.34	cubic yards excavation in culvert pits and ditches	61 73
1,141.268	cubic yards of masonry	2,732 85
	Grubbing and clearing	450 00
	Contingencies	148 97
		23,514 67
	Deduct fifteen per cent. discount	3,527 20
	Total amount paid to Mr. T. Kelly, contractor, up to the last of November, 1838,	19,987 47

Statistics for sections Nos. 17 and 18 of the Northern Cross Railroad.

Quantities for sections 17 and 18, near Columbus—

18,633	cubic yards of earth removed, at 16.6 cents per yard	$3,100 54
222.67	cubic yards excavation from ditches and culverts	33 40
220	cubic yards of mucking	33 00
432.06	cubic yards of masonry	2,335 40
		5,502 34
	Deduct fifteen per cent. discount	828 35
	Total amount paid to the contractors, Messrs. Hendrickson and M'Farland, up to the last of Nov. 1838	4,673 99

The total amount of money that will probably be required for the next six months on Mr. Kelly's contract, is	$20,000 00
On the contract of Messrs. M'Farland and Hendrickson	7,000 00
Total amount of money required for the next six months	$27,000 00

JAMES OAKEY, *Civil Engineer.*

Quincy, *Nov.* 27, 1838.

Report of William Pollock.

ENGINEER'S OFFICE,
Jacksonville, Nov. 24, 1838.

To JAMES M. BUCKLIN, ESQ.,
Chief Engineer of the Western District.

SIR: With a view of fulfilling your instructions of August, 1837, in relation to the survey of the Pekin and Bloomington branch of the Central railroad, and completing the preliminary examinations and location of that portion of it between Tremont and the latter place, (which had been left unfinished last season,) I resumed field operations in April last. Under subsequent instructions, however, it became necessary, in the first place, to revise the location between Pekin and Tremont, for the purpose of altering the maximum grade from fifty feet per mile, as first introduced, to seventy-five feet, as authorized by the Board of Public Works at their session in December, 1837.

To effect this object, a resurvey was commenced at Pekin on the 19th of April, and such changes made in the lateral position of the line as were deemed necessary, economical, and consistent with the vertical alteration—in all cases tending to make the line more direct. The most material alteration in the lateral position of the line took place in Tremont; not on account of any alteration in the vertical position of the line in pursuance of the instructions above alluded to—because the grade was comparatively moderate in the first instance at this place, and there was no necessity for increasing it; but, from further examinations of the country immediately east of the town, it became evident that the most judicious location would be effected by running the line a little obliquely through the town, cutting across the southwest corner of the public square, instead of passing by the way of Park street through the centre of the square, as first located; thus securing a greater length of straight line contiguous to the town, modifying the grade, passing over ground presenting more uniformity of surface, and, consequently, less expensive. It was at first thought to be objectionable to locate the road diagonally through the town, on account of cutting across lots, and thus giving the owners of them a plea for damages. But the road on this route will occupy the lowest ground in the town—it will pass through a ravine and approach nearer the centre of the town than before. The ground along this ravine is wet, and not considered very valuable at present, on that account. The making of the road will have the effect to drain off the water, reclaim and add value to the land; at the same time render the town an essential service in that particular. Moreover, it affords much better satisfaction to the inhabitants of the place, generally, than the former location.

After making some additional examinations between Tremont and Mackinaw, the line of location was established without varying materially from the route spoken of in my report of last year; except, between the crossing of the Mackinaw river and the town of Mackinaw, the line is now run more direct. Its greatest variation from a straight line between the two towns, is about 1¼ miles to the south, and is the only feasible route within that distance. The country in a direct line is considerably broken by the passage of Prairie and Mud creeks; but the valley of the Mackinaw river is the grand difficulty. We find there an immense chasm about one hundred feet in depth, near three-fourths of a mile wide, in the bottom, and the town of Mackinaw situated immediately on the top of the eastern bluff, at the distance of near a third of a mile from its base. A direct line would cross it nearly at right angles, and would require an immense embankment in order to reach the level of the town at a grade of 75 feet per mile. It is important that that level should be attained, to render it convenient for the transaction of business on the road at that place, and that the greatest benefit resulting from the road might be conferred on the town. It is also important and absolutely necessary, in order to continue the road eastwardly, the formation of the country not admitting of any modification of the grade for three-fourths of a mile east of the town.

The distance between Tremont and Mackinaw on the line of location, is a small fraction over seven miles, and as the obstacles which exist on a straight line are not entirely avoided, the construction of the road will still be found expensive on this line. The western bluff of the Mackinaw is reached at a distance of a little over two miles east of Tremont; and Prairie creek, which occurs about midway, is the only break of consequence within that distance. It will require an extent of near one thousand feet of embankment, averaging twelve feet in height.

In descending to the valley of the Mackinaw, the line passes obliquely along the side of the bluff, its favorable position at this place being such as to admit of it without varying the line materially from the desired direction. The bluff is much broken, and heavy excavations and embankments will be the consequence.

The valley of the Mackinaw on this route is wide, owing to the junction of the valley of Mud creek; and the line traversing it rather diagonally makes the distance between the bluffs near three miles. The line for this distance is direct, and continues so to the top of the eastern bluff, near the western boundary of Mackinaw, a distance of near four miles. It will be necessary, however, to introduce curves on either side of the river, in order to cross at right angles, or nearly so, instead of obliquely, as the line now runs.

The line between the bluffs is divided into three nearly equal parts by Mud creek and the river. The bluffs of the former being totally avoided, the passage of the stream itself will not be attended with any great expense. A spur of a ridge intervenes and forms an abrupt bank immediately on the west side of the river, which will occasion some heavy excavation in order to bring the road to a suitable level for the construction of a bridge across the river. Between the river and the eastern bluff, about a mile in distance, the line passes over a low prairie which is

subject to inundation; consequently, an embankment will be required the whole of that distance, averaging about five feet in height, in order to make the road secure. This is rather higher than would seem to be necessary, judging from the present indications of high water; but it must be considered that when this embankment is made, and the water, instead of flowing over the prairie, all turned into one channel, its tendency will be to rise something higher.

In approaching Mackinaw on this route, it is believed that the bluffs present less difficulty than at any other place that could be selected. The line reaches the foot of it at the distance of one mile from town, and offers comparatively a long gradual slope. A heavy and extensive embankment will nevertheless be required at the base, though not exceeding twenty-five feet in height; and in order to reach the level of the town, the grade of seventy-five feet per mile must commence one thousand five hundred feet west of the foot of the bluff. The embankment must of course be carried out from the foot that distance. It will also be required to be extended in the opposite direction nearly double that distance, making near three-fourths of a mile of heavy embankment, and amounting to near ninety thousand cubic yards. At the eastern extremity of this embankment a cut commences, but the quantity of excavation is small compared with the embankment; so that the materials for forming the latter will have to be procured chiefly without the limits of the road. The line passes angling through the southeast corner of the town; that is, the original town. Subsequent to the passage of the Internal Improvement law, the bounds of the town have been very liberally extended. The location is arranged so as to have six hundred feet of a level in the town of Mackinaw, for the purpose of rendering it convenient for the transaction of business connected with the road at that place. The space above mentioned is deemed sufficient for the purpose intended; yet a level of more extended limits would be desirable in passing through a town; and more especially when the grade immediately at either extremity of the level is seventy-five feet per mile, as in this case. But to extend this level even one hundred feet more, would be attended with serious additional expense in the construction of the road in the vicinity of the place. It would either cause the heavy embankment, mentioned as being necessary in ascending the bluff, to be raised 1.42 foot higher; or, in continuing eastwardly, to depress the road more below the surface of the ground than economy or utility would dictate. It was found necessary to adhere to the grade of seventy-five feet per mile for three-fourths of a mile east of Mackinaw; but from thence to Bloomington, the grades are more moderate. In making the examination between Mackinaw and Bloomington, three lines were projected; the first of which, in continuation from Mackinaw, passes along the summit of a ridge which divides the waters that empty into the Mackinaw river on the north from those of the same and those of Sugar creek on the south. This ridge was followed as far as the eastern side of Stout's grove, a distance of eight miles and a half, where it bears to the north entirely out of the desired direction, and leaves high undulating prairie for the remainder of the distance to Bloomington, except about half a mile of timber land in passing through the northern skirt of Dry grove, which occurs about two miles east of the grove first mentioned.

An alteration in the direction of this line was made immediately after passing the timber of Dry grove, and is the only interruption to a straight line between Stout's grove and a point near Bloomington. The first eight and a half miles of this route is nearly the same with the road now travelled between Mackinaw and Bloomington; it passes mostly through land thinly clothed with timber, except two miles through Stout's grove, which is heavily timbered. This part of the route presents a tolerably uniform surface, and would admit of the construction of the road at a moderate expense; but the remainder of the route to Bloomington is unfavorable on account of almost a continual succession of heavy cuts and fills, and abrupt grades. This line is north of a straight line between the two towns, and its greatest variation from it is seven-eights of a mile, which occurs eight and a half miles east of Mackinaw. The distance by this line from Mackinaw to the court house in Bloomington, is 20.7 miles.

In continuing our examinations, the second line was run direct from Bloomington to Mackinaw, passing near the centre of the Twin grove, which is reached at the distance of four miles and a half west of Bloomington, and which is near one mile and three quarters across it; thence touching along the southern border of Dry grove and through the south end of Stout's grove; thence to Mackinaw through scattering timber, denominated barrens, and intersecting the former line a short distance east of the town. This line passes through considerable of cultivated land situated along the skirts of the timber, more perhaps than would be encountered on any other line that could be projected between the two towns; and, if the farmers should consider it a grievance to have the road pass through their farms, this line would be objectionable in some measure on that account. The objections, however, that pertain to the first route, are not avoided on this; but are found to exist to such a degree as to make it necessary and important to seek a more favorable route. In the meantime, from observations extended further south, it became evident that a better route lay in that direction, except for the first mile and three quarters east of Mackinaw. The ridge before described is the most judicious route for that distance, and lies north of the straight line; accordingly, in continuing the line of location from Mackinaw, the ridge was adopted for that distance; thence, leaving the ridge to the north, the line coincides nearly with the straight line for the distance of about three quarters of a mile; thence, deflecting to the right, it was continued straight as far as the line between Tazewell and M'Lean counties, a distance of nearly three miles, reaching the prairie on Mr. Lindsey's farm, four miles from Mackinaw, passing through barrens chiefly all the way, and encountering rough, broken land between the ridge and that place. From Mr. Lindsey's to Bloomington we meet with no timber, except very little in passing the south end of Twin grove. From the county line to a point opposite this grove the line is direct, nine miles in distance, a slight curve then occurs, and the remainder of the distance to Bloomington is likewise direct, making nearly five miles and a half more. From Mr. Lindsey's eastwardly nine miles, the route is very favorable, the prairie being tolerably level. The most expensive point on this part of the route will be the crossing of a branch of Sugar creek, which

occurs opposite Stout's grove. It will require a bridge of twenty-five feet span, and an embankment of twelve hundred feet in length, averaging about ten feet in height. The last seven miles of the route will not be quite so favorable, on account of the prairie being broken and undulating, and requiring deep cutting and filling, and also abrupt grades as high as seventy feet per mile. The grades, however, could be modified on this part of the route, by increasing the cutting and filling, and thus adding to the expense. The curvature between Mackinaw and Bloomington is very trifling, as may already be inferred. The first mile and three quarters of the line next Mackinaw is chiefly curved, having a radius from 1,910 to 2,865 feet. The greatest departure of the location line from the straight line occurs at a point a little over five miles west of Bloomington.

The distance from Pekin to Tremont is 9.47 miles; from Tremont to Mackinaw, 7.15 miles; and from Mackinaw to Bloomington, 19.92 miles: making the whole distance, by the location line, 36.54 miles, terminating at Washington street in the western part of the town. By way of the straight line, the distance is 19.45 miles from Mackinaw to Bloomington, making a difference between the two of near half a mile only.

It is possible that a more suitable termination for this road in Bloomington will become apparent when all the necessary information is attained to determine on the location of the Central railroad through that place. The elevated situation of Bloomington and the rolling land immediately adjoining, will necessarily render the construction of both roads expensive at that place; and, in connecting them, it will require the exercise of considerable skill to accommodate the one to the other in such a manner as to effect the most judicious location.

Survey of the Mackinaw and Peoria Branch.

After having completed the survey from Pekin to Bloomington, and in pursuance of instructions, I proceeded to survey the route between Mackinaw and Peoria. Accordingly, on the 7th of July, at the surface of the water, on the east side of the Illinois river, opposite the foot of Fulton street in Peoria, we commenced a base line. In extending it eastwardly, we reached the bluffs at Farm creek, at the distance of one mile from the river; thence up the valley of said creek to station 103, nearly one mile further, where we left the valley of Farm creek to the north and continued up Epley's hollow, it affording a more favorable direction. But it was found that, in order to gain the table land at a grade of 75 feet per mile, it would incur the necessity of a cut at the head of the hollow of forty feet, and continuing for a long distance. It was therefore objectionable on that account, and also on account of the abrupt curvature which it would impose. Consequently, that route was abandoned, and the line continued up the valley of Farm creek as far as station 305, at the mouth of Roberts' hollow, making 5¾ miles from the river; thence up said hollow, reaching the table land at the residence of Mr. Roberts, a distance of near three miles further; thence nearly direct to Mackinaw, making the whole distance 17.64 miles.

After leaving Mr. Roberts', there is no broken ground of any consequence met with until reaching the breaks of Mud creek, which occur on

the 14th mile from the river. They present no serious difficulty, however, and the route might be called favorable for 16 miles; but on the remainder of the route the bluffs and valleys of the Mackinaw occur, and present a very serious obstruction—in my opinion insurmountable, without transcending the bounds of justifiable expense.

To overcome these difficulties at a grade of 75 feet per mile, would require a cut on the west side of from twenty to fifty-five feet deep for the distance of near half a mile, and an embankment across the valley of from thirty to sixty feet in height and 3,600 feet in length; but to avoid deep cutting in the town, and to form a convenient connection with the other road, it would have to be raised still higher. A bridge of two hundred feet in length would be necessary to pass the water of the river, and the abutments at *this* place would have to be raised at least seventy-five feet above their foundation, which would be attended with enormous expense.

The cost of preparing the road on this first part of the route in a substantial manner for the reception of the rails, would amount to 205,000 dollars, at the most moderate calculation.

To avoid this heavy expense, a line was projected direct from station No. 455, at the head of Roberts' hollow, to a point in the line from Tremont to Mackinaw, intersecting it at the top of the western bluff, 2.13 miles east of Tremont; making the distance from the river at Peoria to this point, 16.08 miles; to which add the distance from this point to Mackinaw (4.81 miles) and it makes the whole distance 20.89 miles—3.25 miles further than by the first route. The distance from the head of Roberts' hollow to the intersection at the bluffs is 7.47 miles, all prairie except a portion of the last mile, and presents a favorable surface. The radius of curvature between the river and this point will not be shorter than 1,432 feet, and the grade will not exceed 37 feet per mile, except in Roberts' hollow, where from 45 to 70 feet will have to be adopted. These grades conform very well to the natural slope of the hollows, and the foundation of the road will not be expensive. I am aware, however, that the Board of Public Works have not authorised the grade on this road to exceed 40 feet per mile; but if it is confined to that, I have only to state that this route is impracticable, and that no other can be found more favorable.

The Illinois river opposite Peoria presents a wide surface, it being more than half a mile at low water mark. In time of freshets, it spreads to the eastern bluff, making the width a little more than a mile and a half, and inundating the intermediate land to the depth of about sixteen feet next to the river, its depth gradually decreasing to the foot of the bluff. To raise the road above high water mark in this part of the route would require an embankment one mile long; and to have it sufficiently elevated above high water, it would be necesssary to raise it about eighteen feet on the flat next the river.

Materials for the construction of this embankment would have to be taken chiefly from the bluff; and the heavy end of it being next the river and the most remote from the materials, its construction would be attended with much expense.

The mode of crossing the river, however, which is to be adopted must be considered, and the road adapted to it in such a manner as to be the

most convenient and economical. Owing to the vast expense that would be incurred in erecting a bridge at this place, and the inconvenience that the navigation of the river would sustain from it, I believe it is not contemplated at present; therefore, the only mode of crossing will be by means of a ferry. In that case, whilst an embankment carried across the low ground to the height above indicated might be convenient in time of high, it would be very inconvenient at a low, stage of the river, there being a difference of at least twenty feet between high and low water, which would make it necessary to introduce an inclined plane, with stationary power, in order to connect with the river in low water. But the plan which it is believed would unite economy with convenience in the best manner, is to raise the embankment only about two feet above the natural surface of the ground, and suffer the road to be immersed in time of high water, and during that time ferry all the way to the bluff.

In order to conduce to this arrangement, the earth for the formation of the embankment should be all taken from the upper side, and thus form a wide ditch that would admit of the passage of the ferry-boat during the partial immersion of the road. This part of the road will have a descent from the bluff to the river of seventeen feet per mile; and it will therefore be necessary to construct several turnouts between the bluff and the river, so as to connect with the boat at the various stages of high water.

Rock abounds in the bluffs of the Illinois river, but on the route of neither of the branches between the river and Mackinaw, after leaving the bluff, is there any discovered of a suitable quality for the construction of the necessary bridges and culverts. The same remark will also apply between Mackinaw and Bloomington. It will therefore be necessary to substitute some other material in lieu thereof. Brick, it is believed, would supply its place better than any thing else, and be nearly, if not quite, as durable for the numerous small culverts that will be necessary. It will be important that brick for this purpose should be manufactured in a superior manner to those commonly in use; hard burning in particular will be an essential and indispensable requisite. Good clay for the purpose of making brick can be found almost anywhere, and the neighboring groves of timber along the route would afford an abundance of fuel for the burning of them.

The prices charged at present through this part of the country, for finding all the materials and laying up brick wall, are from eight to ten dollars per thousand. Eleven hundred brick of the common dimensions, laid in mortar, will make two perches of 25 cubic feet each, which, at the rate of ten dollars per thousand, would be five dollars and fifty cents per perch. The competition that would be brought forth by the offer of large contracts for furnishing brick, would probably enable the State to procure them of a suitable quality at about the same price that is now paid for the common article; but to make a safe calculation, I shall estimate the cost of the brick work, per perch, at six dollars.

The alteration of the grade between Pekin and Tremont, and the work as now contracted for, will reduce the expense of grading that portion of the road about $60,000; making $40,297 instead of $100,297, as first estimated; thus reducing the average cost per mile to 4,192 dollars instead of 10,457 dollars.

An aproximate estimate of the cost of graduation between Tremont and Bloomington, and the branch to Peoria, gives the following result:

From Tremont to Mackinaw, 88,704 dollars, making an average cost per mile, in round numbers, 12,406 dollars.

Between Mackinaw and Bloomington, the location line, 78,157 dollars, averaging 3,924 dollars per mile; and the whole distance amounting to 166,861 dollars, averaging 6,164 dollars per mile.

By way of the straight line between the towns last mentioned, the cost amounts to 121,715 dollars, and the average per mile is 6,253 dollars; making a difference, in favor of the location line of 2,329 dollars per mile. The northern line between these two points also bearing an unfavorable comparison with the location line, I consider it unnecessary to present an estimate of the cost.

The whole amount from Pekin to Bloomington is 207,154 dollars, and the average per mile 5,670 dollars.

Between the river at Peoria and the intersection of the line at the Mackinaw bluff, the cost of grading will amount to 31,934 dollars, and average $1,986 per mile. To estimate the whole distance to Mackinaw, the cost amounts to 108,268 dollars, and averages 5,183 dollars per mile.

The superstructure for the road, exclusive of iron, has been contracted for, at $3,210 per mile. I shall assume that price as a fair criterion, and estimate the cost of one mile of the superstructure as follows:

Superstructure, exclusive of iron - -	$3,210 00
22 tons of iron, at $70 per ton - -	1,540 00
Spikes, plates, and nails - - -	250 00
	$5,000 00

	Distance in miles.	Cost of graduation.	Cost of superstructure.	Total.	Ten per cent. for contingencies.	Total cost.	Total cost per mile.
Pekin and Bloomington branch - -	36.54	$207,154	$189,854	$389,854	$38,985	$428,839	$11,736
Peoria branch - -	16.08	31,934	80,400	112,334	11,233	123,567	7,684

Table of Grades from Pekin to Bloomington.

No. of grades	Length in feet.	Aclivity per mile, in feet and decimals.	Declivity per mile, in feet and decimals.	Height above base, line in feet and dec.
Pekin	–	–	–	35.50
1	1,700	10.56	–	.38.90
2	4,300	75.00	–	109.96
3	3,200	22.17	–	113.40
4	7,700	48.57	–	184.24
5	2,000	75.00	–	212.64
6	400	Level	–	212.64
7	2,300	–	19.04	209.99
8	1,500	–	Level	209.99
9	3,100	75.00	–	244.01
10	1,500	Level	–	244.01
11	2,000	36.96	–	258.01
12	300	Level	–	258.01
13	900	–	42.29	250.81
14	200	–	Level	250.81
15	1,000	63.36	–	262.81
16	1,200	10.56	–	265.21
17	1,700	5.28	–	282.21
18	500	Level	–	282.21
19	5,500	–	75.00	204.11
20	600	–	31.68	200.51
21	1,100	–	Level	200.51
22	1,200	33.26	–	208.07
23	3,590	Level	–	208.07
24	1,100	26.40	–	213.57
25	700	Level	–	213.57
26	2,000	29.04	–	224.57
27	210	15.855	–	230.87
28	1,400	Level	–	230.87
29	1,500	–	75.00	209.57
30	500	–	Level	209.57
31	1,000	75.00	–	223.77
32	2,900	20.064	–	234.79
33	500	Level	–	234.79
34	3,000	–	70.224	194.89
35	3,700	–	75.000	142.35
36	4,300	–	Level	142.35
37	2,400	52.80	–	166.35
38	800	Level	–	166.35
39	2,500	–	31.68	151.35
40	4,000	–	Level	151.35
41	6,700	75.000	–	246.49
42	600	Level	–	246.49
43	4,000	75.000	–	303.29
44	4,100	33.264	–	329.12
45	500	Level	–	329.12
46	2,000	–	10.56	325.12
47	100	–	Level	325.82
48	1,500	21.120	–	331.12
49	400	Level	–	331.12
50	1,800	–	21.12	323.92
51	400	–	Level	323.92
52	1,800	21.120	–	331.12
53	1,600	Level	–	331.12
54	4,800	–	68.660	268.72
55	400	–	Level	268.72
56	5,000	29.568	–	296.72

Table of Grades from Peoria to Bloomington—Continued.

No. of grades.	Length in feet.	Aclivity per mile, in feet and decimals.	Declivity per mile, in feet and decimals.	Height above base line, in feet and dec.
57	200	Level	Level	296.72
58	1,700	–	44.88	282.27
59	200	–	Level	282.27
60	1,800	21.120	–	289.47
61	300	Level	–	289.47
62	1,000	–	26.40	284.47
63	200	–	Level	284.47
64	1,800	15.84	–	289.87
65	200	Level	–	289.87
66	1,900	–	26.40	280.37
67	2,100	–	Level	280.37
68	1,600	–	10.56	277.17
69	800	–	Level	277.17
70	3,400	39.60	–	302.67
71	2.100	Level	–	302.67
72	1,900	26.40	–	312.17
73	6,500	Level	–	312.17
74	5,500	–	14.784	296.71
75	1,700	–	31.68	286.57
76	3,000	–	Level	286.57
77	4,300	60.192	–	335.59
78	1,000	Level	–	335.59
79	2,600	–	72.336	299.97
80	800	–	Level	299.97
81	3,700	61.192	–	342.13
82	3,000	47.520	–	369.13
83	1,900	Level	–	369.13
84	2,800	–	47.520	343.93
85	400	–	Level	343.93
86	2,800	47.520	–	369.13
87	200	Level	–	369.13
88	3,000	–	58.08	336.13
89	2,200	–	Level	336.13
90	2,400	–	47.520	314.53
91	1,100	–	Level	314.53
92	3,700	50.688	–	350.05
93	2,500	26.400	–	362.55
94	200	Level	–	362.55

The commencement of the road at Pekin is 35.50 feet above low water in the Illinois river.

Central Railroad.

Further instructions directed my attention to the examination and survey of a route for that portion of the Central railroad between Bloomington and the Sangamon river. In accordance therewith, on the 9th of August, a line was commenced at the former place, in Washington street, at the present ending of the location line between Bloomington and Pekin, and run in the direction of said street to a point near the southern boundaries of the town. From this point the true course to Decatur was determined, as near as practicable, with a view of running a straight line all the way to that place, as instructed by you. Accordingly, it was continued direct as far as the edge of the prairie south of Salt creek, except a slight variation for a short distance in passing the breaks of

the Kickapoo creek, between ten and eleven miles from the starting point. The whole distance thus run is 26.85 miles. The first three miles from Bloomington passes through a forest called Blooming grove: thence through a prairie for nearly five miles, and we reach Randolph's grove, which is about three miles across, and through which runs the Kickapoo creek: thence passing a prairie of nearly three miles and a half wide, the timber of Long Point creek is reached. It is near one mile and a half across. Thence intervenes a prairie of nearly six miles wide, and we reach the timber of Ten-mile and Salt creeks, the former a tributary of the latter. This timber is near five miles across, and extends to the edge of the prairie before alluded to. The prairies described present no difficulty to the construction of the road; but in the timber very serious obstacles exist, the ground being much broken by the passage of those streams. In Blooming grove the greatest difficulty is the high land which we find there. It is four hundred and sixty-five feet above the Illinois river at Pekin, and the highest land between that place and Decatur. It would require a cut a little over a mile in length and fifty feet in depth at its vertex, to bring the road to a grade of forty feet per mile. The passage of the Kickapoo would also be expensive on this line; but the most serious difficulty of all would be the valley of Salt creek. This route proving more unfavorable than was anticipated, and the crossing of Salt creek evidently less expensive farther east, it was deemed useless to extend the straight line any further. The remainder of the distance to Decatur being chiefly prairie, and no particular choice in the ground, it was considered the best economy to continue a line to Decatur that would correspond with the most favorable route across the valley of Salt creek. Accordingly an offset of half a mile was made to the east, to a point in a north and south section line which passes nearly through the centre of Decatur: thence following this line to that place, and through Water street, to station 2,317, near the southern boundary of the town; making the distance from the offset to this point, 17.05 miles, and the whole distance from Bloomington, exclusive of the offset, 43.88 miles. From this point a deflection was made to the west, and a direct line run to the bluff, on the south side of the Sangamon river, 1.09 miles further, reaching the river at a point where it approaches the nearest to Decatur. The direction of this line was unfavorable, and the very broken ground over which it passed, still more so. The abrupt ascent of the bluff on the south side was also an additional objection; consequently it was abandoned. The surface of the country between Decatur and the river is extremely broken and difficult.

In reconnoitering the country south of the river, the valley of Ward's branch, which lies in a favorable direction, presented itself as being the most feasible route for ascending from the valley of the Sangamon to the table land. The mouth of this valley is about one mile and a half above where the river was intersected by the first line. The line then through Water street was extended from station 2,317 in that direction, curving to the east and passing the intervening hills and valleys in the most favorable manner, crossing the river about two hundred and eighty yards below Allen's mill, and at the distance of 1.28 miles from Decatur: thence continuing obliquely across the valley and reaching the bluff at the distance of near three-fourths of a mile further, where it comes to a point at the junction of Ward's branch, and where a curve of eight hundred feet radius will have to be instituted for a short distance in order to effect an entrance into the valley of said branch. The whole distance from Bloomington to the mouth of Ward's branch is forty-six miles. The survey was not continued further. This branch is about five miles in length, and, from its appearance, would admit of moderate grades and curvatures, excepting the latter, at the mouth of the valley, already noticed.

Two other routes through the town of Decatur presented claims for examina-

tion—one west and the other east of the line through Water street; and in discharge of our duty with regard to them, two lines were run through the town parallel with the first, commencing eight hundred feet north of the town opposite station 2,290; the one being nine hundred feet west and the other seven hundred east of the first line. The former, at the southern boundary of the town, curves to the east and intersects the line twenty-eight hundred feet south of the town, and one mile and two hundred and twenty feet from the starting point. The other was continued direct to the first one, and intersects it still farther south.

A comparison of the expense of these routes result in favor of the eastern, and shows the route through Water street to be the most expensive. Although the name might indicate the contrary, Water street is the highest part of the town, and would require a cut of from ten to fifteen feet deep for nearly its whole length; which would render it inconvenient to transact business on the road at that place. That circumstance alone would be a sufficient reason for determining in favor of either of the other routes. The line north of the town can be adjusted to either without increasing the expense.

I expected to have been able to have extended this line north to Bloomington, commencing at the offset before mentioned, south of Salt creek, but my party chiefly all becoming sick, I was obliged to dismiss them, and the unhealthiness of the country at that time, and the prevalence of disease, was such that it was impossible to procure hands. I was therefore compelled to suspend further operations. Considerable inconvenience and delay were experienced in the course of the season, having been obliged on two occasions previous to dismiss the hands on account of inability from the same cause, and to employ, with one or two exceptions, entire new sets.

Further examinations will be necessary between Salt creek and Bloomington, before a route for the location of the road can be determined on. But I am of the opinion that the most favorable route between the offset, south of Salt creek and Randolph's grove, would coincide nearly, if not quite, with the same section of line that was traced between the offset and Deatur; thus making a straight line from the latter place of about 32.50 miles, and passing on the eastern boundary line of Clinton, a town situated about midway between Bloomington and Decatur. Before quitting the field we took occasion, although with much inconvenience for the want of hands, to run sections across the valley of Salt creek, Long Point, and the Kickapoo creeks upon this section line; and although still found expensive, the two first of these crossings bear a favorable comparison with those on the first line, but the crossing of the Kickapoo and its branches through Randolph's grove were found much more expensive. It is probable that the better route through this grove will be found somewhere between the two lines, which are a little more than a mile and a quarter apart. In Blooming grove the high land will be avoided in a great measure, and the advantage of a better route gained by keeping from half a mile to a mile east of the present line.

The line between Bloomington and the Sangamon river will be mostly straight, as has been shown, and no curves, it is believed, will be required under one thousand nine hundred and ten feet radii. The grades will probably reach forty feet per mile for about one-fifth of the distance. The groves through which this route passes will afford an abundance of excellent timber for the bridges and superstructure of the road; and having neglected it in its proper place, I will here remark that the branches between Bloomington and the Illinois river possess the same advantage, being convenient to timber.

The same kind of material that was recommended for bridge abutments and culverts on those branches, is also considered the most suitable for the same purpose on this road, there being no stone on the whole route except in the bluffs of the Sangamon river.

There, it is probable that an extensive quarry of lime stone might be opened within a mile and a half of the crossing of the river, and which would afford convenient materials for the construction of the bridge abutments at that place, and also the culverts in the vicinity. But it is thought that the superiority of stone over good brick would not justify the transportation of the former to a distance that would raise the price above that adopted for the latter, unless it be the foundations of heavy bridge abutments or coping.

Between Bloomington and the bluff south of the Sangamon river, the estimate of the probable cost of graduations on the present line is exhibited in the tables appended to this report.

From Bloomington to the prairie south of Salt creek, 27 miles, the cost would amount to 460,269 dollars, and makes the average cost per mile, 17,040 dollars. The remainder of the distance, by way of the eastern line through Decatur, (19 miles) will cost 75,421 dollars, and averages $3,969 per mile. The first sixteen miles of this distance amounts to 31,040 dollars, and the last three miles to 44,381 dollars; the former averaging $1,940 per mile, and the latter $14,793.

The entire distance, (46 miles) amounts to 535,690 dollars, and averages 11,645 dollars per mile.

To adopt the line through Water street, in Decatur, would add 14,914 dollars to the total expense, and the line through the western part of the town, 7,394 dollars.

The valley of Salt creek is the greatés obstacle that is met with in the whole route. By crossing it and the valley of Long point on the section line before described, there would be a saving of 81,554 dollars, that is, admitting the other parts of the route to be equal. The three miles through Blooming-grove, on the present line, amount to 127,769 dollars; but it is confidently believed that, by running a line further east, and thus avoiding the deep cut, the expense per mile, on the three miles, will not exceed 12,000 dollars, and thereby reduce the cost 91,769 dollars. The expense on the section line through Randolph's grove was found to be more than on the line first run, by 26,140 dollars; but there is no doubt entertained that a route equally favorable as the first, if not more so, may be found without departing materially from the most favorable direction.

Now, counting the expense through Randolph's grove the same as on the first line, the expense of the entire route, according to the foregoing statements, would be reduced 173,323 dollars; making it 362,367 dollars, and averaging 7,877 dollars per mile.

I regret exceedingly that I have not sufficient data to enable me to approximate to the actual cost with more certainty. I feel confident, however, that it will not exceed the above estimate, and may be very considerably lessened.

At the request of the Commissioner, Mr. McConnel, I made an examination of the country immediately west of Decatur, with a view to ascertain the practicability of extending the Northern Cross railroad more directly to Decatur than by intersecting the line of the Central railroad four miles north of the town, as recommended by Mr. Frederick Hawn, the engineer who surveyed the route last season.

I found the country much broken for the distance of nearly four miles

west. The valley and breaks of Stephen's creek, and those of several of its tributaries, are embraced within that distance, the first of which presents the most formidable difficulty.

I assumed a point in Mr. Hawn's line near station 897, at the intersection of a range and section line, four miles, or at least four sections, west of Water street in Decatur. From this point an offset was made, north half a mile, which affords an opportunity of passing the broken ground immediately east to better advantage. From thence, the line was continued tolerably direct to Decatur, crossing Stephen's creek at a point where it approaches nearest to the town, and terminating at station 2,305 (a suitable point) in the line for the Central railroad through the eastern part of Decatur, making the distance 4.13 miles.

This line evidently passes near the most favorable ground that is presented within that distance, except a portion next the west end, which would be better adapted to the ground by starting from a point a fourth of a mile from Mr. Hawn's line, instead of half a mile. The expense of the line west of this offset would not be altered materially, either way, by adjusting it to any line that may be found the most suitable from thence to Decatur.

The extension of the line to Decatur, by this route, passes mostly through timbered land, some of which would be very suitable for the use of the road.

The following table exhibits the probable cost of graduation for the line above described.

No. of miles.	Excavation.			Embankment.			Masonry.			Grubbing and clearing.	Total cost of each mile.
	Amount of cubic yards.	Cost per yd.	Total cost.	Amount of cubic yards.	Cost per yd.	Total cost.	No. of perches.	Cost per perch.	Total cost.		
		ct			ct						
1	28,535	18	$5,136 30	22,655	18	$4,077 90	100	$6	$600	$100	$9,914 20
2	17,001	17	2,890 17	24,069	17	4,091 73	48	6	288	250	7,519 20
3	49,394	20	9,878 80	57,637	20	11,527 40	1,294	6	7,764	250	29,420 20 *720 00
4	11,823	18	2,128 14	10,251	16	1,640 16	80	6	480	30	4,278 30
feet 1657	1,017	13	132 21	2,740	15	411 00	14	6	84	–	627 21
	107,770		$20,165 62	117,352		$21,748 19	1,536		$9,216	$630	$52,479 81

*Superstructure for bridge, 40 lineal feet, at $18 per foot.

Total cost of graduation - - - - - -	$52,479 81
Total cost of superstructure = $5,495 x 4.13 miles =	22,694 35
	75,174 16
Add ten per cent. for contingencies	7,517 41
	82,691 57
Total cost per mile - - - - - -	$20,022 17

Accompanying this report are the maps and profiles of the different routes.

In conclusion, I will remark that the gentlemen by whom I was assisted in the execution of these surveys, especially Mr. Charles Hardin, are entitled to much credit for the ability and fidelity which they have manifested in the discharge of the respective duties assigned them.

Respectfully submitted,

WM. POLLOCK,

Senior Assistant Engineer, Western District.

MONTHLY ESTIMATES

OF

THE NORTHERN CROSS RAILROAD.

Date.	Names of contractors, and locality of work and materials furnished.	Excavation.		Embank
		Cubic yards.	Cost per y'd.	Cubic yards.
1837.			*cents*	
September	January, Dunlap & Co., 1st section, 1st division -	6,200	26½	14,466
October	Same do. do. -	7,450	20	8,349
November	Same do. do. -	3,600	20½	7,150
November	Same 2d section, 1st Mauvaisterre -	2,000	20	9,000
December	Same do. do. -	4,820	30	7,278
1838.				
January	Same 1st section, 1st division -	5,000	25	7,000
January	Same 2d section, 1st Mauvaisterre -	12,386	27	10,347
January	Calhoun, Early & Co., 3d division - - -	2,930	20	3,257
February	January, Dunlap & Co., 1st section, 1st division -			
February	Calhoun, Early & Co., 3d division - - -	600	22	2,768
February	January, Dunlap & Co., 2d section, Mauvaisterre -	500	27	500
March	Same do. do. -	5,721	27	14,828
March	Same 2d section, 1st division -	2,880	30	5,000
March	Calhoun, Early & Co., 3d division - - -	662	24	435
April	January, Dunlap & Co., 2d section, 1st division -	22,260	30	20,000
April	Same 2d section, 1st Mauvaisterre -	11,521	27	11,849
April	Calhoun, Early & Co., 3d division - - -	901	–	9,901
May	January, Dunlap & Co., 1st section, 1st division -	15,000	33⅓	30,000
May	Same 2d section, 1st Mauvaisterre -	–	–	8,563
May	Calhoun, Early & Co., 3d division - - -	272	26	16,604
June	January, Dunlap & Co., 1st division - - -	10,170	30	5,000
June	Same 2d sec. 1st div. Mauvaisterre -	2,020	30	93
June	Same 2d division - - -	11,788	50	28,600
June	Same 2d div. Briar fork & South fork	3,590	20	7,903
June	Calhoun, Early & Co., 3d division - - -	5,000	25	8,553
July	January, Dunlap & Co., 1st division - - -	–	–	–
July	Same 1st division, Mauvaisterre -	1,230	27	1,718
July	Same 2d division - - -	–	–	–
July	Same 2d div. South & Briar forks -	1,010	20	9,998
July	Calhoun, Early & Co., 3d division - - -	2,144	24	7,217
June, July	S. Grubb, 3d division, Sangamo viaduct	–	–	–
August	January& Dunlap 1st division - - -			
August	Same 1st division, Mauvaisterre -	9,489	30	7,593
August	Same 2d division - - -	–	–	–
August	Calhoun, Early & Co., 3d division - - -	9,285	24	–
August	S. Grubb, 3d division, Sangamo viaduct	–	–	–
September	January, Dunlap & Co., 1st section, 1st division -			
September	Same 2d sec. 1st div. Mauvaisterre -	6,095	30	5,500
September	Same 2d division - - -	–	–	–
September	Calhoun, Early & Co., 3d division - - -	6,388	22	4,381
September	S. Grubb, 3d division, Sangamo viaduct	–	–	–
October	January, Dunlap & Co., 1st division - - -			
October	Same 2d sec. 1st div. Mauvaisterre -	3,166	30	2,976
October	Same 2d division - - -	–	–	–
October	Same 2d division - - -	6,666	30	–
October	Calhoun, Early & Co., 3d division - - -	2,150	24	6,416
October	S. Grubb, 3d division, Sangamo viaduct	–	–	–
Aug. Sept. and Oct.	Leslie & Collins, Naples branch Northern C. R.	2,400	17	12,378

the Northern Cross Railroad.

ING.

ment.	Rock excavation.		Hard-pan excavation.		Masonry culverts.		Foundation of culverts and stone delivered.	Masonry viaducts.	Foundations of viaducts.	Superstructure of viaducts.	Grubbing.	Extra grading and ditching.	Number of miles graded.
Cost per y'd.	Cubic yards.	Cost per y'd.	Cubic yards.	Cost per y'd.	Perches of 25 cubic feet.	Cost per y'd.							
cents.				*cents*									
28	–	–	–	–	62	$6	–	–	–	–	–	–	2
40	–	–	–	–	91½	10	–	–	–	–	–	45	3.06
24½	–	–	–	–	–	–	–	–	–	–	$200	–	1.25
30	–	–	1,000	40									
30	–	–	500	40	–	–	–	–	–	$500			
25	–	–	–	–	56	12	–	–	–	–	–	–	1.00
30	–	–	–	–	66.4	10	–	–	–	300			
32													
25													
30	–	–	–	–	–	–	–	$300 00	–	400			
30	–	–	–	–	–	–	–	600 00	–	–	–	–	.85
35	–	–	–	–	940								
35	500	$2	–	–	110	9¼	$234						
45	–	–	–	–	–	–	393	–	–	–	–	–	5.62
30	–	–	–	–	388	10							
35	652	2											
40	–	–	–	–	840	–	–	–	–	–	–	580	4.50
30	–	–	8,884	50	1,310	10	1,980	3,096 00					
35													
40	–	–	–	–	250	7							
30	116	1	–	–	500	–	1,470	–	–	–	–	–	5.00
40	–	–	–	–	–	–	–	–	–	–	–	1,659.6	
40	–	–	–	–	–	–	–	–	–	–	800		
35	333	2	–	–	–	–	–	423 00					
–	–	–	–	–	–	–	–	–	–	–	–	–	* 2.72
30	–	–	1,718	50	–	–	–	–	$1,500	980	–	–	6.00
–	–	–	–	–	780	–	–	–	–	–	–	–	
40	–	–	–	–	–	–	1,400	2,700 00					
21, 35	–	–	–	–	–	–	–	427 50					
–	–	–	–	–	–	–	–	836 00					
30	–	–	–	–	–	–	1,400	3,450 00	–	1,500			
–	–	–	–	–	810	–	–	–	–	–	–	–	4.00
–	–	–	–	–	–	–	–	711 00					
–	–	–	–	–	–	–	–	3,840 00					
30	782	2	–	–	–	–	1,817	3,612 00	–	500	–	–	4.75
–	–	–	–	–	655								
22	–	–	–	–	50	9¼	–	186 00					
–	–	–	–	–	–	–	–	428 00					
30	–	–	–	–	–	–	2,000	5,746 00	–	1,000	–	–	7.00
–	–	–	–	–	940								
–	–	–	–	–	–	–	4,000	1,800 00	2,000				
30	–	–	–	–	38.81	8¾	–	272 00					
–	–	–	–	–	–	–	–	3,040 00					
17, 43	–	–	–	–	72	8							

*Balance due on grading per mile work.

SUPER

Date.	Names of contractors, and locality of work and materials furnished.	Mud sills, lineal feet.	Number of cross-ties.	Longitudinal sills per lineal foot.
1837.				
September	January, Dunlap & Co., 1st section, 1st division -			
October	Same do. do. -			
November	Same do. do. -			
November	Same 2d section, 1st Mauvaisterre -			
December	Same do. do. -			
1838.				
January	Same 1st section, 1st division -	12,000	1,000	
January	Same 2d section, 1st Mauvaisterre -			
January	Calhoun, Early & Co., 3d division - - -	-	395	5,948
February	January, Dunlap & Co., 1st section, 1st division -	2,000	-	14,000
February	Calhoun, Early & Co., 3d division - - -	578	-	7,140
February	January, Dunlap & Co., 2d section, Mauvaisterre -			
March	Same do. do. -			
March	Same 2d section, 1st division -	-	-	9,209
March	Calhoun, Early & Co., 3d division - - -			
April	January, Dunlap & Co., 2d section, 1st division -	6,068	3,135	12,117
April	Same 2d section, 1st Mauvaisterre -			
April	Calhoun, Early & Co., 3d division - - -			
May	January, Dunlap & Co., 1st section, 1st division -	28,900	-	
May	Same 2d section, 1st Mauvaisterre -			
May	Calhoun, Early & Co., 3d division - - -	-	-	6,723
June	January, Dunlap & Co., 1st division - - -	20,000	15,000	20,000
June	Same 2d sec. 1st div. Mauvaisterre -			
June	Same 2d division - - -	-	-	6,632
June	Same 2d div. Briar fork & South fork			
June	Calhoun, Early & Co., 3d division - - -	-	1,100	7,666
July	January, Dunlap & Co., 1st division - - -	35,000	13,000	30,000
July	Same 1st division, Mauvaisterre -			
July	Same 2d division - - -	26,475	-	25,752
July	Same 2d div. South & Briar forks -			
July	Calhoun, Early & Co., 3d division - - -	-	186	2,296
June, July	S. Grubb, 3d division, Sangamo viaduct			
August	January & Dunlap 1st division - - -	18,000	-	17,060
August	Same 1st division, Mauvaisterre -			
August	Same 2d division - - -			
August	Calhoun, Early & Co., 3d division - - -	-	1,367	
August	S. Grubb, 3d division, Sangamo viaduct			
September	January, Dunlap & Co., 1st section, 1st division -	5,000	6,200	-
September	Same 2d sec. 1st div. Mauvaisterre -			
September	Same 2d division - - -			
September	Calhoun, Early & Co., 3d division - - -			
September	S. Grubb, 3d division, Sangamo viaduct			
October	January, Dunlap & Co., 1st division - - -	22,500	-	28,300
October	Same 2d sec. 1st div. Mauvaisterre -			
October	Same 2d division - - -			
October	Same 2d division - - -			
October	Calhoun, Early & Co., 3d division - - -			
October	S. Grubb, 3d division, Sangamo viaduct			
Aug. Sept. and Oct.	Leslie & Collins, Naples branch Northern C. R.	16,195	6,124	23,295

Cross Railroad—Continued.

STRUCTURE.

Number of wedges.	Spikes for cross-ties.	Altering railroad spikes and splicing plates.	Laying superstructure.	Additional tracks.	Number of miles laid.	Depots.	Engine House.
-	-	-	$3,205	$570 34	2		
50,000	-	-	3,000	300 00	2		
-	$600	-	2,250	-	1.50		
-	-	-	2,000	-	1.33	-	$971
-	3,312	450	-	-	2.25	$3,050 00	
-	-	-	-	-	-	4,787 78	

Date.	Names of contractors, and locality of work and materials furnished.	Gross amount of estimate.	Discount.
1837.			*per c't.*
September	January, Dunlap & Co., 1st section, 1st division -	$5,996 90	15
October	Same do. do. -	6,585 70	15
November	Same do. do. -	2,500 00	15
November	Same 2d section, 1st Mauvaisterre -	3,700 00	15
December	Same do. do. -	4,331 40	15
1838.			
January	Same 1st section, 1st division -	4,450 00	15
January	Same 2d section, 1st Mauvaisterre -	7,712 32	15
January	Calhoun, Early & Co., 3d division - - -	-	-
February	January, Dunlap & Co., 1st section, 1st division -	1,340 00	33
February	Calhoun, Early & Co., 3d division - - -	-	-
February	January, Dunlap & Co., 2d section, Mauvaisterre -	980 00	15
March	Same do. do. -	5,999 07	15
March	Same 2d section, 1st division -	3,166 00	15
March	Calhoun, Early & Co., 3d division - - -	-	-
April	January, Dunlap & Co., 2d section, 1st division -	18,869 11	15
April	Same 2d section, 1st Mauvaisterre -	7,446 57	15
April	Calhoun, Early & Co., 3d division - - -	-	-
May	January, Dunlap & Co., 1st section, 1st division -	35,899 40	15
May	Same 2d section, 1st Mauvaisterre -	14,874 10	15
May	Calhoun, Early & Co., 3d division - - -	-	-
June	January, Dunlap & Co., 1st division - - -	19,731 00	15
June	Same 2d sec. 1st div. Manvaisterre -	2,219 90	15
June	Same 2d division - - -	-	-
June	Same 2d div. Briar fork & South fork	-	-
June	Calhoun, Early & Co., 3d division - - -	-	-
July	January, Dunlap & Co., 1st division - - -	28,639 40	15
July	Same 1st division Mauvaisterre -	4,161 90	15
July	Same 2d division - - -	-	-
July	Same 2d div. South & Briar forks -	-	-
July	Calhoun, Early & Co., 3d division - - -	-	-
June, July	S. Grubb, 3d division, Sangamo viaduct	-	-
August	January & Dunlap, 1st division - - -	6,335 00	15
August	Same 1st division, Mauvaisterre -	11,474 60	15
August	Same 2d division - - -	-	-
August	Calhoun, Early & Co., 3d division - - -	-	-
August	S. Grubb, 3d division, Sangamo viaduct	-	-
September	January, Dunlap & Co., 1st section, 1st division -	3,843 00	15
September	Same 2d sec. 1st div. Mauvaisterre -	11,689 50	15
September	Same 2d division - - -	-	-
September	Calhoun, Early & Co., 3d division - - -	-	-
September	S. Grubb, 3d division, Sangamo viaduct	-	-
October	January, Dunlap & Co., 1st division - - -	10,510 00	15
October	Same 2d sec. 1st. div. Mauvaisterre -	10,588 60	15
October	Same 2d division - - -	-	-
October	Same 2d division - - -	-	-
October	Calhoun, Early & Co., 3d division - - -	-	-
October	S. Grubb, 3d division, Sangamo viaduct	-	-
Aug. Sept. and Oct.	Leslie & Collins, Naples branch Northern C. R.	15,340 84	-
		$248,384 31	-

Cross Railroad—Continued.

SION.	SECOND DIVISION.			THIRD DIVISION.		
Nett amount of estimate.	Gross amount of estimate.	Discount.	Nett amount of estimate.	Gross amount of estimate.	Discount.	Nett amount of estimate.
		per cent.			*per cent.*	
$5,097 37						
5,597 84						
2,125 00						
3,145 00						
3,681 69						
3,782 50						
6,555 47						
-	-	-	-	$3,516 88	15—33	$2,869 38
897 80						
-	-	-	-	1,621 20	15—33	1,256 83
839 80						
5,609 20						
2,691 10						
-	-	-	-	4,770 71	15—30	3,765 52
16,038 74						
6,329 41						
-	-	-	-	4,989 37	15	4,240 96½
30,514 49						
12,642 98						
-	-	-	-	6,016 75	-	5,113 73
16,771 35						
1,886 91						
-	$18,246 34	15	$15,509 39			
-	4,679 56	15	3,977 62			
-	-	-	-	5,831 75	15	4,956 98
24,353 49						
3,537 61						
-	23,392 62	15	19,883 73			
-	9,110 00	15	7,743 50			
-	-	-	-	3,156 57	15	2,683 08
-	-	-	-	836 00	15	710 00
5,384 75						
9,753 41						
-	14,000 00	15	11,900 00			
-	-	-	-	2,868 13	15	2,437 91
-	-	-	-	3,840 00	15	3,264 00
3,266 55						
9,936 07						
-	14,000 00	15	11,900 00			
-	-	-	-	3,136 37	15	2,665 91
-	-	-	-	428 00	15	363 80
8,933 50						
9,000 31						
-	26,949 80	15	22,907 33			
-	7,800 00	15	6,630 00			
-	-	-	-	2,590 30	15	2,201 75
-	-	-	-	3,040 00	15	2,584 00
13,039 82						
$211,402 16	$118,178 32	-	$100,451 57	$46,642 03	-	$39,113 07

Monthly estimates of Pekin and Bloomington Branch Railroad.

Dates.	Numbers of sections.	Names of Contractors.	Excavation-cubic yards	Cost per yard.	Embankment-cubic yards.	Cost per yard.	Masonry No. of perches.	Cost.	Grub'ing and clearing.	Gross amount of estimate.	Per cent. discount.	Nett am't of estimate.
1838.				*Cents.*		*Cents.*						
May	6	Wm. S. Maus	1,174	19	939	22	20	$4 00	$250	$759 00	15	$645 15
	5, 7, 8, & 9,	Horton Twitchel	5,828	16—20	6,309	20—28	8	6 00	463	3,230 00	15	2,746 23
June	1, 2, 4, & 6,	Wm. S. Maus	6,746	18—27	11,149	16—23	70	4 00	40	4,844 00	15	4,117 40
	5, 7, 8, 9, & 10,	Horton Twitchel	3,712	14—20	2,349	20—28	38	4 12	5	1,532 00	15	1,302 20
July	1, 2, 4, & 6,	Wm. S. Maus	2,283	18—27	3,421	16—23	55	4 06	–	1,676 00	15	1,424 60
	5, 7, 8, 9, & 10,	Horton Twitchel	3,951	14—20	3,416	20—28	78	4 12	–	2,111 00	15	1,794 35
August	1, 2, 4, & 6,	Wm. S. Maus	1,938	18—27	5,331	16—23	75	3 06¾	–	2,325 00	15	1,755 25
	5, 7, 8, 9, & 10,	Horton Twitchel	3,725	14—20	4,770	20—28	100	4 12	50	3,297 00	15	2,802 45
Sept. &	1, 2, 4, & 6,	Wm. S. Maus	7,725	18—27	4,011	16—23	216	3 06¾	–	3,258 00	15	2,769 30
October	5, 7, 8, 9, & 10,	Horton Twitchel	5,396	14—20	7,967	20—28	439	4 12	–	5,920 00	15	4,267 00
			42,928	–	19,662	–	1,099	–	–	28,052 00	–	23,623 93
July.	Paid Charles G. Scott & Co., contractors, on account of timber for superstructure							– –	– –	500 00	15	335 00
October.	Paid Charles G. Scott & Co., contractors, on account of timber for superstructure							– –	– –	1,000 00	15	850 00
										29,552 00	15	24,808 93

SUMMARY.

	Grading.			Superstructure.		
	Original amount of work, and cost.	Amount of work done, and cost.	Amount of work remaining to be done, and cost.	Total cost of superstructure, exclusive of iron, including 3,400 feet of double track, at $3,700 per mile.	Amount paid on work done.	Amount remaining to be paid.
Cubic yards excavation -	62,604	42,928	19,676			
Cubic yards embankment -	87,403	49,662	37,741			
Perches of masonry -	1,520	1,099	421			
No. of lineal feet supt. for bridges	100					
Total cost - - -	$40,297	$28,052	$12,244	$37,740	$1,500	$36,240

EXHIBIT No. II.

REPORT OF WILLIAM KINNEY,

WITH ACCOMPANYING DOCUMENTS.

VANDALIA, *December* 20, 1838.

To the Board of Commissioners of Public Works of the State of Illinois.

The undersigned, acting Commissioner on the public works for the second judicial circuit, and on so much of the great western mail route as is situated in the third judicial circuit, respectfully reports the progress of his operations for the last six months on the several works assigned to his charge as acting commissioner thereon, as follows, that is to say:

ALTON, HILLSBORO, AND SHELBYVILLE RAILROAD.

At the last meeting of the Board, the above work was transferred from the western to the southern engineering district, and the surveys and examinations of the line were then in progress under the special charge of Mr. F. Hawn, assistant engineer. Mr. Hawn was forthwith requested to report himself to the principal engineer of the southern district.

He was immediately instructed to confine his examinations and surveys to that portion of the line between Alton and Hillsboro, in order that the portion of the work ordered by the Board to be put under contract might be let without delay. The character of the country and variety of routes proposed, made it necessary to establish the most elaborate examinations to arrive at correct conclusions in regard to the most judicious route for the road; and consequently much time was necessarily consumed in the surveys preparatory to the letting. The report and estimates of the assistant engineer are herewith submitted.

The letting of the grading and superstructure of the railway on the first thirteen miles from the city of Alton took place at the Internal Improvement office, in Belleville, on the 22d day of October last; and contracts have been entered into for the execution of the work, to be commenced within forty days, and to be completed within eighteen months from the day of letting.

The estimates of the portion of the line put under contract were as follows, viz:

For grading - - - - -	$50,420 27
Superstructure complete - - -	45,470 00
Total - - -	$95,890 27

Making an average cost per mile, exclusive of iron, $7,360 80, or about 9,000 dollars per mile, including that article.

The aggregate contract price of the work exceeded the above estimated cost about 2½ per cent., which would make the total cost $97,287 47 or 7,484 dollars per mile, exclusive of iron for the track.

Since the lettings of the western division of the work, Mr. Hawn has extended his preliminary survey to Shelbyville, and has now disbanded his party. Sufficient time has not elapsed since the completion of the field work for him to make his report in detail; but he is now actively engaged, with a draftsman as assistant, in preparing his report, drawings, and estimates, which, when finished, will be laid before the Board.

I have, however, received from him a general report, in which he informs me that there are no serious obstacles to the economical construction of a useful railroad on the route; and that the cost of construction will be less per mile than that of the western division now under contract. The total length of the line, by the experimental survey from Alton to Shelbyville, is nearly one hundred miles.

There have not been any payments yet made on acconnt of construction on this line of the work.

The disbursements for engineering, obtaining right of way, and other contingencies, up to this time, amount to $596 87, and is chargeable to this work.

I have received propositions from the corporation of Upper Alton for the voluntary grant of lands for a depot in that town; and also from Robert Smith, Esq. for a like grant of land for a general depot for the above and the Southern Cross railroad, at the junction of the two lines, near Shields' branch, in the city of Alton. These several propositions have been submitted to your Board, and an order granted thereon.

Southern Cross Railroad.

As stated in my last report, the western division of this road between the city of Alton and Edwardsville, making about fourteen and one-third miles, was placed under contract on the 15th day of February last. The grading of the several sections has progressed with an efficiency that gives a reasonable assurance of their completion within the time limited in the contracts. The hope I expressed in my last report, that the contractors for the superstructure would efficiently prosecute the work, has been disappointed, and I have been reluctantly compelled to declare their contract abandoned, and to re-let the work.

I accordingly advertised this part of the work, and re-let the same at the Internal Improvement office, in Belleville, on the 23d day of October last. This part of the work is now let to an efficient and experienced contractor, and at an advance of about one hundred and fifty dollars per mile over the price of the first contract.

The engineer's attested estimate for this work, including the cost of half a mile of double track and turn-outs, is as follows, viz.

For grading and bridging - - - - -	$50,586 99
Superstructure, exclusive of iron - - -	45,274 35
Total, exclusive of iron - - -	95,861 34
Iron and fixtures - - - - - - - -	33,970 00
	$129,831 34

Making an average cost, including one-half mile of double track and turn-outs, of $9,058 21 per mile.

The contract price for the graduation and superstructure is about six per cent. above the estimate of the engineer; but from the purchases which have been made of railroad iron, it is ascertained that the estimate for that item was too liberal, and which, together with some reduction of cost by a subsequent change of grade on some of the heavy sections, will perhaps compensate for the difference between the contract and estimated prices of the whole work.

The total amount of work done on the contracts for grading and bridging, up to the 10th instant, as exhibited by the engineer's estimate thereof, on file, is $30,053 15.

The whole amount disbursed for construction, after retaining 25 per cent. on amount of estimates, which have been paid up to November 30th, is $21,458 91, leaving a balance necessary to complete the contracts for grading and bridging, according to the estimated price, and to pay over the retained per centage, of $29,128 08.

The total amount paid by me for the out-fit of engineering parties, and expenses of the original survey and examination of the whole line, from the Wabash to the Mississippi river, and for the expenses of all subsequent engineering and contingent accounts, are as follows, viz:

For out-fit of engineering parties - - - -	$ 427 73
Engineers and supplies - - - - -	4,160 51
Contingent and office accounts - - - -	298 32
Lands entered - - - - - - - -	1,116 08
Proportionate share of general expenditure - -	3,467 31
	$9,469 95

At the last meeting of the Board, two miles of this line of work, including the crossing of the Kaskaskia river at the town of Carlyle, and the bridge over that river to accommodate both the railroad and the great western mail route, was ordered to be placed under contract. This work was surveyed by Mr. Terrell, assistant engineer, under the instructions of the principal engineer of this district, whose report and estimates are herewith submitted. The work was let at the Internal Improvement office in Belleville, on the 23d day of October last, and contracts closed therefor.

The crossing of the valley and river of the Kaskaskia is one of the greatest obstacles to be overcome on the whole route of this road between the Wabash and Mississippi, and necessarily embraces heavy and expensive work.

It is worthy of remark, however, that the two miles, and the crossing now let, embrace all the expensive work within many miles on each side of the river, and that the grading of the road can be continued in both directions with small comparative cost.

The estimated cost of the double-track bridge, and two miles of grading, is $34,226 48; the contract price for the same work is $33,132 18.

There has not been any payment for construction on this part of the work; and the expenses of the party engaged in its definite location have been paid by the Commissioner of the fourth judicial circuit, and charged to the work by him.

I have stated, under the head of another work, that I had received a proposition for the voluntary grant of lands for a depot, at the junction of this road and the Alton and Shelbyville railroad, in the city of Alton. As the proposition has met the views of the Board, I shall suggest the necessity of an order for the erection of a depot and machine shop at the above sites offered to the State.

The total ascertained length of the Southern Cross railroad, from the bank of the Wabash river, in Mount Carmel, to the bank of the Mississippi river, in the city of Alton, by the route of the experimental servey, the whole of which was surveyed under my direction, is 153 miles. The original survey, however, for a considerable portion of the line, was made in reference to a grade not exceeding 30 feet to the mile, and the residue of it to a grade within 40 feet. This necessarily increased the curvatures and length of the line, and added greatly to the labor and time necessary to make the survey. By adopting an increase of grade at some few points, the distance will be reduced; and, it is estimated by the engineer, will he brought within 147 miles. This change will also very materially reduce the first cost of the work without prejudicing the general utility of the road.

Belleville and Lebanon Branch of the Southern Cross Railroad.

This line of work has been surveyed, and several routes or points of connection with the main line examined. The result of the survey exhibits the practicability of a cheap construction of this important branch of our system of public works, and there exists no doubt of the extension of the road from Belleville to the city of St. Louis by the company now incorporated to construct it, as seven miles thereof, from the Mississippi river, are already constructed and in operation. I therefore submit to the Board, whether the claims of the citizens immediately interested in this road should be deferred any longer; and suggest the propriety of commencing the work at the next lettings which may be ordered.

The total length of this branch road, from Belleville to the intersection of the Southern Cross railroad, at or near Highland, in Madison county, is twenty-three and a half miles.

Great Western Mail Route.

In the months of August and October last, I let all the jobs of work on so much of this road as lies in my district, which had not previously been contracted for.

All the contracts have been prosecuted with efficiency, except two of the largest on the American Bottom, which were let in October, 1837. After granting every indulgence to the contractors consistent with my duty, in order to enable them still to complete their contracts, and save to themselves the retained per centage on the work done by them, their inability to complete the work in any reasonable time became manifest, and I accordingly declared their contracts abandoned in the month of October last. As the work was left in an unfinished state, and the public interest imparatively demanded that this part of the road should be placed and kept in a condition to be travelled during the winter, I employed superintendents and laborers, and am now prosecuting the work with them.

The engineer's estimate of the work proposed to be executed on the American Bottom division, was $28,734 68; and the contracts were taken at about the estimates of the engineers, (say 29,000 dollars.)

The disbursements on this division of the work have been as follows, viz: For construction, $11,268 10, leaving a balance of the special appropriation for this part of the work, of $18,731 90.

The engineer's estimate of the probable cost of the work proposed to be executed on the whole western division, extending from the American Bottom to the eastern line of Marion county, a distance of ninety miles, amounts to $86,896 not including Albright and Rodger's estimate.

In order that the disbursements of the general appropriation for this work might be fairly apportioned over the whole line, from the Wabash to the Mississippi, agreeably to law, the contracts are let, specific as to price, but conditional as to amount and description of work to be executed by contractors, reserving the right to the Commissioners to designate, from time to time, what specific portions and items of work on the respestive contracts shall be first commenced and completed—with the understanding, however, that the bridging and most difficult portions of the road shall be first executed. So that, although the account of all the work embraced in the contracts, if fully completed, might overrun the appropriation; yet the resevations in the contracts will enable the Commissioners to keep the disbursements within those limits.

The total amount of disbursements on this line of work, exclusive of the American Bottom, are as follows, viz:

For construction, engineering, superintendence, and contingencies - - - - -	$57,021 10
Proportionate share of general expenditure account	6,521 74
	$63,542 84

In the above amount for outfit, engineering, and contingencies, is embraced the cost of the original survey and location of the whole line of road from St. Louis to Vincennes, made by Mr. Gilpin, the assistant engineer, under my directions.

A tabular statement marked A, accompanying this report, exhibits more fully, and in detail, the number, extent and present condition of the several contracts or jobs on this work, with the names of the contractors on each, respectively; to which statement I respectfully refer the Board for further information.

The total ascertained length of this road is 152 miles, 14 miles of which are west of Belleville, and 138 east of that point.

Central Railroad.

The portion of the Kaskaskia division, embracing the crossing of that river near Vandalia, which the Board ordered under contract at their last semi-annual meeting, was let at Vandalia on the 13th day of August last.

The engineer's estimate for this work, including the cost of masonry for the bridge over the river, was $44,660 03.

The amount of the contract price for the same work amounts to $42,778 19.

The disbursements made by me on account of this work are, for construction, $461 67

Experimental lines for this work have been run throughout my circuit, and the result of them, I presume, will be found in the report of the Commissioners of the third and fourth circuits, under whose immediate direction the surveys were conducted.

Alton and Shawneetown Railroad.

The preliminary examinations and surveys of this road, which were in progress at the date of the last meeting of the Board, under the charge of Mr. Lathrop, assistant engineer on the work, have been completed. The report of the assistant engineer, accompanied by the drawings and estimates of the Silver creek sections of work, which were ordered under contract by the Board at their June meeting, is all that has been received by me in relation to that survey. The report on the other portion of the line, I am informed, has been delayed by sickness, and other causes beyond the control of the engineer.

The grading of the Silver creek sections of the work, including a distance of a fraction over three miles, and embracing the crossing of the creek, was offered for contract, and let at the Internal Improvement office in Belleville, on the 23d day of October last. The contracts were let under the condition that the line should undergo a revision, which the principal engineer then thought to be necessary, and which there was not time to effect before the day of letting. This revision has subsequently been made, and the contractors have efficiently commenced their respective jobs.

The revised estimates amount to $14,620 47, and the contract price will not materially vary from that amount. The cost of the original survey of this work has been paid by the Commissioner of the third judicial circuit, and by him charged to this work. The expenses of the subsequent revision of the line at Silver creek comprise all the disbursements yet made by me; and this having been done by the engineer

engaged on the Southern Cross railroad and Western mail route, and the amount being comparatively trifling, it has been charged to other accounts, and no account has yet been opened by me against this work.

Kaskaskia River Improvement.

As stated in my last report to the Board, the examination and survey of the obstructions to the navigation of this river were commenced about that date, and were conducted under the immediate directions of Col. Wm. C. Greenup, engineer on the work. The report, drawings, and estimates of the engineer have been filed in the office of the Board of Public Works, and exhibit, in detail, the nature and extent of the several obstructions, and the plans proposed for their removal.

The survey and examinations developed the fact that the work, necessary and practicable to be executed, would not admit of such definite specifications and description as to enable contractors to bid understandingly for it, or the Commissioner to prosecute it by contract. I therefore determined to lose no time in waiting for the action of the Board, but proceeded to prosecute the work by superintendents and laborers employed and paid by me as acting Commissioner.

The report of Col. Greenup, the superintending engineer on the work, dated the 3d instant, and herewith submitted, explains in detail the operations on the river up to that date.

The total disbursements made on account of this work, up to the 28th ultimo, were as as follows, viz.

Amount of disbursements charged to work - -	$1,846 30½	
Proportionate share of general expenditure - -	211 17	
		2,574, 47½

The requisition of the Fund Commissioners to divide among the several works the expenditures heretofore made and charged to the general fund account, has been complied with by me with as much accuracy as the nature of the case will admit of. I still entertain the opinion, however, that a general fund account is contemplated by the internal improvement law. There are a variety of expenditures—as the entry of lands, the purchase of teams, camp equipage, and surveying instruments, the compensation of the secretary of the Board, and numerous others authorized by law—and yet not properly chargeable to any particular work or appropriation. If there are any doubts on this subject, it is well that they should be agitated at the present time, when the whole matter can be set at rest by legislative enactment.

After this general division of the general fund account amongst the several works under my charge, the total amount expended by me and charged to them, respectively, to Nov. 30, inclusive, is as follows, viz:

On the Great Western Mail route - - - - -	$63,512 84
On the Southern Cross Railroad - - - - -	30,953 76½
On the Belleville and Lebanon Branch Railroad -	371 48
On the Alton and Shelbyville Railroad - - -	665 07
On the Central Railroad - - - - -	9,644 25
On the Kaskaskia river Improvement - - -	2,057 47½
Total amount expended - - - - -	$105,235 25

The report of the principal engineer of the southern engineering district, together with the reports of the assistant engineers in my circuit, therein referred to, is herewith submitted.

General Remarks.

My situation as President of the Board has, no doubt, tended to increase my correspondence beyond that of the other Commissioners; and it has added much to the office labor and attention in my circuit. This correspondence has been carefully preserved, and, for the most part, put on record for the use of the Board and their successors.

From my long residence and the opportunities I have had of observation, and particularly in the southern section of the State, it might be presumed, and I indeed thought myself, that I was long since fully aware of the advantages of the country. I must, however, confess that the journeys I have taken in attending the meetings of the Board and the various lettings of contracts, in which I have travelled not less than two thousand miles since I entered on the duties of my office, have developed facts, and presented aspects of the country of which I had not been previously aware; and which have more fully demonstrated to my mind the great importance of our system of internal improvements. In the nature of things, I cannot expect to see, in my life-time, the full development of these advantages, and to enjoy them. But, believing conscientiously that the future prosperity and happiness of the people will be greatly promoted by carrying out the system to its full and entire completion, I am bound to advocate it to the extent of my abilities. So far from its being too large and extended, I believe that it might be enlarged with great propriety and decided advantage to the general welfare of the whole State, if suitable appropriations were made, in addition to those already granted by the Legislature, not only to improve the navigation of our rivers, but, in connection with the same, to drain the ponds and lakes; which can be accomplished with an inconsiderable expense, in comparison to the general utility, health, and pecuniary prosperity of the whole State.

In the low grounds, in many cases, five hundred or a thousand acres of land can be drained and reclaimed with less than a hundred dollars expense; and the draining of the Great American Bottom itself, it is believed, would increase the value of the soil therein at least five millions of dollars; all of which can be effected with an expense not exceeding two hundred thousand dollars; and as an evidence of the improvement of health, it is an incontrovertible fact that the town of Kaskaskia, which is situated on the bank of Kaskaskia river, between that river and the Mississippi, and near the junction of the former, has always been and is one of the most healthy towns in the State; the obvious reason of which is, that lakes and ponds do not exist below the point of the bluff between the two rivers, so that when each or either are high and overflow their banks, they again recede to their original channels without remaining to form lakes or ponds, which has been the great cause of such deleterious effects as are so seriously felt in other portions of the American Bottom.

Our system, it is true, is large and spacious, but not more so than the beauty, the fertility and peculiar situation of our State demand. The facility with which settlement and farms can be made and the certain and abundant reward which awaits the toil of the agriculturist, is inducing, and has caused an unprecedented amount of this valuable description of emigration to every portion of the State.

The southern section of the State, which has heretofore been measurably overlooked or underrated, is now, in common with the more favored north, attracting the notice of the enterprising settler.

To conquer the forests of Kentucky and Ohio, or the older States, and prepare the face of the country for profitable cultivation, has cost, in time and labor, more capital in each than would complete many such systems of internal improvements as ours; whereas, in Illinois, the land is found cleared to our hands—the farmer has but to plough, to plant, and to gather.

The roads themselves, from this peculiar character in the face of the country, can be constructed with great ease and rapidity. By commencing the improvements at the rivers where lumber is abundant, and running them into the interior, the materials for the railways, as well as for fencing and building, are transported into the very heart of the great prairies, with less cost than they can be carted a few miles with an ordinary team. The settler can carry his house with him, and put up a shelter for his family, with the same ease that a surveyor would pitch his tent, and his posts and plank would follow him to fence his field before oxen could prepare the ground for his crop. His articles of consumption would come in the same convenient channel, and whatever surplus his industry and the fertility of his soil would produce, would find a ready market at his own door.

I am persuaded this is no fancied picture; for already are the prairies rapidly being entered by intelligent farmers in anticipation of these obvious results. Moreover, the country along the lines of these improvements will enjoy all the advantages of the best navigable streams in the State, without any of their deleterious effects, which are always apprehended, and but too often felt, by the inhabitants along their borders.

The great Central railroad through the centre of the State will, under the present system, be intersected with numerous cross roads, connecting with the rivers on our borders and the work in progress, or in contemplation, in Indiana, and will afford the facility of throwing into the southern market the surplus products of the State, at a time when the Ohio and Upper Mississippi, and their numerous tributaries, are locked up with ice, or impeded with shoals, and thereby enable the farmer to command the best possible price for his produce. The articles of consumption can likewise be distributed to every portion of the State, with certainty and economy, and at all seasons of the year, without any interruption, and thereby prevent those fluctuations in price, caused by the inequality of demand and supply, which are so prejudicial both to the dealer and consumer. Were this system now in operation, the present deficiency in the supply of the indispensable article of salt, so seriously felt in many portions of the State, and which has been caused by the interruption of the navigation during the last season, could not have happened.

The increase in price which the citizens of this State will pay the present year, for this article alone, will exceed, in all probability, double the taxes of the State, to say nothing of other articles of indispensable necessity, which, from the same causes, have been greatly enhanced in price.

These general advantages, which would result from the completion of the system and its gradual increase as the means of the State would warrant, are not all the advantages I anticipate from it. I believe that, in point of revenue, it will disappoint its most sanguine friends. If the amount of travel and transportation which now passes between Louisville and St. Louis, or Chicago and the several points on the Mississippi, be taken as a basis of calculation, no reflecting man can doubt that the work must yield a handsome revenue to the State. Residing on the great western mail route, I have had an opportunity of observing the amount of travel during the last season of low water in the Ohio, between Louisville and St. Louis. The line of mail stages on this route, during the whole period of this continued drought, carried passengers, which averaged, at the ordinary fare, (as I have understood,) fifteen hundred dollars per week, or at the rate of about $75,000 a year. And during the same period, every means of travel, by private conveyances, which could be obtained in Louisville, seemed likewise to be put in requisition. During this period, an intelligent gentleman of Missouri, (the Hon. T. H. Benton) on his way homeward, at Salem, stated to me that it was then estimated that there were 2,000 persons in Louisville waiting for conveyance to the Mississippi river, and that every means of travelling was engaged to carry passengers to St. Louis, or other points on the river. I speak of this as one case only within my own knowledge, and have every reason to believe that other routes across the State were equally thronged. And it appears to me that, even at a period when the steamboats are in full operation, the time and risk of life which could be saved by travelling on our roads, would enable them effectually to compete with the river communication.

A person from New Orleans, on arriving at the mouth of the Ohio, a point where boats of the largest class can, at all seasons, have safe and easy access, could there take a land conveyance, and arrive at St. Louis, Alton, Peoria, or any other northern point in the State, and at Louisville, in Kentucky, in half the time that it would require a steamboat to ascend in the most favorable stages of water; and the variety of the journey, independent of its expedition and safety, would always present a powerful inducement in its favor.

There is another certain source of revenue, which has generally escaped the attention of writers on this subject, and may, with propriety, be alluded to here. It is the profits arising from the transportation of the United States' mail, which must always be given to the railroads, on account of their superior expedition.

It is well understood that the value of land and its products form the basis of substantial wealth in all countries. If we are to judge of Illinois by this statement, we cannot but admit that the aggregate value of property in the State has greatly increased since the passage of our internal improvement law; and it is equally certain that the markets for produce have been materially improved by the existence and operation of the system.

The character of the State abroad, has been elevated, and, during a season of unprecedented pressure in the commercial world, the bonds of this State have been in demand when other States were unable to effect their loans. The capital which has been brought into the State in a variety of ways, in consequence of the operation of the system, has enabled our people to pass through a perilous crisis in the monetary affairs of this country and of Europe, without depreciation in the value of property, or suffering pecuniary distress. Without intending to anticipate the report of the Fund Commissioners, I have no doubt it will be found that all these happy results have been achieved without a dollar of charge on the Treasury; and I have the fullest confidence that the same energetic and prudent management which has characterised the Board of Fund Commissioners, if persevered in, will enable the State to carry out the system to its full completion without imposing burdens on the people.

In view, then, of all the advantages which the system promises, I am unable to perceive how any substantial objections can be urged against it. If errors or abuses are alleged by any to have been committed in its prosecution, it seems, to my mind, that this forms no substantial objection to the system itself.

The official connection with the system, with which I have been honored, was bestowed upon me without my knowledge or solicitation; I accepted of it with a view of rendering my feeble aid in carrying out the intentions of the law, to the extent of my abilities; and I have found, by experience, that the commencement of the system, in its incipient stages at least, has been a task, to me, of much labor, both of body and mind, whatever may be its operations hereafter.

That I have at all times avoided error, is too much for me to suppose, but that I have endeavored to act to the best of my judgment and ability for the success of the several works under my charge, and, as a member of the Board, for the promotion of the best interests of the whole system, I hope will be conceded to me.

To you, gentlemen, I take this opportunity to make my humble acknowledgments for the assistance and indulgence which you have afforded me on all occasions in the performance of my several duties, as acting Commissioner and President of your Board.

With sentiments of high respect, and the utmost confidence, gentlemen,

Your obedient servant,
WILLIAM KINNEY,
Acting Commissioner of the Second Judicial Circuit.

POSTSCRIPT.

Our delegation in Congress, at the last session, requested me, as President of the Board, to furnish them with a diagram of all the surveys and most probable routes of the different railroads, &c., so that the United States Senate could publish them appended to the journal of the Board and the laws of our internal improvement system; which was complied

with by me, through the aid I received from each member of the Board, by their supplying me with the diagrams; but, in making out the same by the engineer in my office, the diagram of the Great Western mail route was accidentally omitted. My letter to the Hon. A. W. Snyder, on that subject, is herewith submitted. (See letter No. 1.)

It will be remembered that, on a former occasion, the Board authorized me to correspond with Mr. Stansburry, United States engineer, sent out for the purpose of examining and surveying the Kaskaskia and Illinois rivers. On the subject, my letter (No. 2) to him, and a subsequent one (No. 3) to the Hon. A. W. Snyder, are herewith submitted.

I also submit the report of the engineers who surveyed the said river under my directions, together with my correspondence with them on the subject. (See report No. 4.)

I was also authorized, or requested by the Board, to correspond with our delegation in Congress on the subject of allowing this State to import railroad iron free from duty, without the customary formalities of the present law; (see letters Nos. 5 & 6:) and also on the subject of obtaining assistance by donations of land, and grants of the right of way, &c., to carry out the system of internal improvements; which letter (No 7,) is herewith submitted.

No. 1.

INTERNAL IMPROVEMENT OFFICE,
Belleville, April 14, 1838.

SIR: In making out the the diagrams, at your request, of the railroads for publication with the internal improvement law and journals of the Board of Commissionsrs, the diagram of the Great Western mail route was accidentally omitted by the engineer who drafted or laid down the same, which should, and would have been done, had it not have been for the accident occurring.

The Western mail route, which is of great importance to this country and the travelling community in general, is undergoing, under the authority of our internal improvement system, rapid improvements; which will warrant an early, easy, and safe passage to the mail stage, and all other carriages for the accommodation of the travelling community.

This road passes from St Louis, through Belleville, seat of justice, and Lebanon, St. Clair county; Carlyle, Clinton county; Salem, Marion county; Maysville, Clay county; Lawrenceville, Lawrence county, and thence to Vincennes. By reference to the map of the State, the general features of the route can be seen, which runs through one of the most beautiful and fertile countries, perhaps in the world, of the same extent; and, when the improvement of the same is finished, a ride in one of the beautiful and newly established stages (which has just commenced running on the same) in the month of May or June through the Grand prairie, &c., would, in my opinion, drive the blue devils as far from a stage passenger as a chase after a gang of buffaloes would from an Indian west of the Rocky mountains.

With great respect, your obedient servant,

WILLIAM KINNEY,
Acting Commissioner of the Second Judicial Circuit.

Hon. A. W. SNYDER, *Washington city.*

No. 2.

BELLEVILLE, *August* 25, 1837.

SIR: The Board of Public Works, at their last meeting, passed a resolution authorizing me to request of you a transcript of your report of the survey of the Kaskaskia river. A copy of the report of the survey of the Illinois would also be thankfully received by the Board. I herewith send you a copy of the law establishing the internal improvement system of Illinois, which exhibits the manner in which the Commissioners of Public Works are required to make the survey of said rivers, which, however, may be of no service to you, unless your instructions from Government will authorize you to make the surveys, in part or in whole, in conformity to said law.

Very respectfully, I am
Your most obedient servant,
WILLIAM KINNEY,
Acting Commissioner Second Judicial Circuit
and President B. P. W.

Mr. ERSKINE STANSBURY,
U. S. Engineer in survey of the
Kaskaskia and Illinois rivers.

No. 3.

BELLEVILLE, *February* 5, 1838.

DEAR SIR: The Board of Commissioners of Public Works, in June last, passed an order authorizing me to correspond with the United States engineers sent out to survey the Illinois and Kaskaskia rivers, on the subject of their reporting, or furnishing a copy of their report in respect to the examination of the latter river, to me or the Board. Accordingly I did so, and have heard nothing from them.

They are now in Washington city. Erskine Stansbury is the name of the principal engineer sent for that purpose; and should their report be, as it must be, favorable to the improvement of said river, I would thank you to ask of them a copy of the same; and I think it advisable for our delegation to endeavor to get a donation, either in land or otherwise, to aid the State in improving said river, as a company is now making up to build a steamboat to navigate the same.

With much respect, I am truly yours,
WILLIAM KINNEY,
President Board Public Works.

Hon. A. W. SNYDER

No. 4.

Kaskaskia River Improvement.

INTERNAL IMPROVEMENT OFFICE,

Belleville, July 17, 1837.

Hon WILLIAM KINNEY,
Acting Com'r Second Judicial Circuit.

SIR: In compliance with the request in your letter to me of the 1st, and the instructions of the principal engineer of the southern engineering district, of the 8th, I commenced on the 13th of last month, at Vandalia, with the engineering party, in the two light boats which you had prepared for the purpose, to make the necessary examinations and surveys of the Kaskaskia river, with a view to the adoption of plans for the improvement of its navigation, and completed the same on the 7th inst.

According to the instructions, I procured copies of the several township plats through which the river runs, to enable me to identify with sufficient accuracy the location of the several points where obstructions exist, and which it was necessary to note, without the expense of meandering the whole course of the river. It is to be regretted, however, that, in executing the surveys of the public lands of the United States, some portions of the river were not meandered. And although the river is protracted through all the sections, and wherever the lines intersect or touch the river, the points are accurately drawn, yet the serpentine course of the river from line to line are only occular drawings.

In the instructions, I was referred to the 18th section of the internal improvement law, and required to adopt such plans for the improvement of the navigation of the river as contemplated by that act, but at the same time others might be embraced so as to have a more extended appropriation than that now made. Consequently, my examinations and surveys were made with a view to steamboat, keelboat, and flatboat navigation from the mouth of the river upwards, giving the low water channel in the river, at the shoalest places, a convenient and uniform depth for the uninterrupted passage of keel and flatboats, and of steamboats of such dimensions as may be best adapted to the navigation thereof, and for the removal of such timber obstructions as may be deemed injurious or dangerous to the navigation—having a due regard, also, to the greatest and most useful amount of water-power to be created or rendered for the use of the State, and to equalize the expenditure of the sum appropriated, as near as may be, on all portions of the river susceptible of improvement from its junction with the Mississippi upwards, by removing the obstructions from its channel, in making short cuts across the bends, and clearing off the trees from the margin of the river.

The instructions further require of me to divide the proposed improvements into convenient sections for putting the work under contract whenever I found it to be practicable to make detailed estimates, descriptions, and specifications, so as to enable persons proposing to contract to bid understandingly for its execution.

In regard to the capacity of the stream for navigable purposes, various opinions have been expressed. The General Assembly, by an act passed

on the 20th February, 1819, declared it a navigable stream from its mouth up to township No. 7 north. Subsequently, by another act, commissioners were appointed by law, and an appropriation and some expenditures were made for improving the navigation, which were applied principally below Carlyle; but the small amount appropriated, and consequently the little work done, did but little to improve the condition of the river in the navigation.

The source of this river is in Champaign county, and it may be termed *the river of the prairies*. Its general course is from N. E. to S. W., stretching diagonally almost across the State through an extensive prairie region of great fertility and beauty. It is a stream of considerable length, and is very sinuous in its course, and much resembles at a common stage of water, a canal obstructed only by timber and snags, which, when removed, and in some places straightened by opening cut offs across the points, it must become an important stream for navigation. And it seems to me that in an impartial consideration of the subject of making the necessary improvements, the burden ought not to rest wholly upon the present means of the State. It is known that at the present time the United States own four-fifths of the lands contiguous to this river; and unless the navigation is improved to afford facilities for transporting the surplus products of these fertile lands, they must remain for a long time the property of the General Government. Would it not be good policy on the part of the National Government to donate alternate portions of the contiguous vacant lands to the State, to aid the State in raising the necessary funds to extend the navigation of this river? The example of the donation for a like purpose, near Chicago, is so well known as having produced an income to both Governments, that it is only necessary to be alluded to, to make it manifest in this case.

To ascertain the capacity of the river, at the point of commencing my examinations, I took a survey and levelling above and below the mill dam opposite Vandalia. The stage of water at the time (13th June, 1838,) was about eight inches above the lowest known water mark. The least depth of water in the channel below the dam was four feet and four-tenths; the medium width of the surface of the water ninety-eight feet; the rise from low to high water marks 11.285 feet; the quantity of water discharged per hour, 1,847,799 cubic feet.

The surveys of the public lands afford a convenient and beautiful application of science to the geography of the country, chequering it into sections of a mile square. In making my notes and estimates, the examinations and surveys, I was governed by the sectional lines through which the river passes, and also in making the estimates of distance. These river estimates of distance governed the estimates of cost of removing the timber and snags, and the cost of clearing the timber along the banks. Should it be deemed expedient at any future time to put the execution of the proposed improvements under contract at a public bidding, it may be easily divided into suitable contract sections by the details given of the river through the several sections of the public surveys.

It will appear by the notes and estimates herewith returned, that the actual distance along the river, as unimproved, from the mouth up to Vandalia, is 204 miles and 70 chains; and that, when improved as proposed, the distance will be lessened 24 miles and 20 chains by means of cut-offs,

making the distance, when improved from Vandalia to the mouth, 180 miles and 50 chains.

The notes, estimates, and profiles exhibit the following estimated cost:

For removing logs, &c., in the river	$7,734 77
clearing of river banks	7,792 02
removing the timber of two rafts	400 00
clearing sand islands, willow points and clearing timber from cut-offs	1,150, 00
making brush dams	796 00
excavating cut-offs	1,564 00
Total	$19,536 79

These estimates of cost were made with the understanding that the work was not to be executed by contract, but that it would be done under the immediate direction of a superintendent or agent. The reasons which influenced that understanding are, that it will require an outfit for a snagboat, suitably constructed for that purpose, with the necessary tackle and apparatus for removing the logs and snags in the bed of the river, which would cost more than it is probable a contractor would be likely to incur, unless he undertook the whole, or a major part of the work—and it would be difficult so to define the work in a manner that an undertaker could form any correct estimate how to bid, or be bound to the performance of it in the way it would be required to be done by an inspecting engineer; and that it would require the constant attention of an engineer and assistant superintendents during the whole time of performing the work, to direct the manner, and see that the work was effectually executed, which could not be specified understandingly on paper. Taking this view of the mode of executing the work, the additional expense of the boat, apparatus, and requisite tools; and also adding some additional cost which will have to be made for sluices and wing-dams to concentrate the water in a few places into a main channel, which a rise in the river at the time of making the examination prevented us from laying off and making an estimate for—it is probable that the whole, exclusive of locks and dams for slack-water, will not exceed the sum of thirty thousand dollars.

The best plan, therefore, that I feel safe in recommending to you for executing that work, is to procure a suitable snagboat, with the necessary tackle, tools and implements and employ about forty suitable laborers, under the charge of a superintending engineer, with two experienced superintendents of the work, and furnishing the necessary subsistence. A part of these laborers to be engaged in cutting, sawing, and removing the trees and snags in the river, and the rest in chopping down and cutting off into short lengths all such trees and brush as hang over the river; and cutting away all roots, stumps, and other things likely to stop or arrest floating timber, and prevent the formation of drifts or rafts; grubbing up the willows and shrubbery on the islands, and, as far as may be deemed necessary, remove every thing that would be considered likely to obstruct the passage of navigating vessels; and removing such trees as are likely to wash down and fall into the river on each bank; and excavating the earth to make the cut-offs across the points and bends referred to in the notes.

When the river is cleared in the manner suggested, and the cut-offs made, no reason can be perceived why this river may not be safely navigated as far up as Vandalia by steamboats, drawing not more than three feet of water, at least six months in a year; and flat and keels, drawing not more than that depth of water, might pass nine months in a year. I am certain that such might have been the case for the last four or five years, had the river been improved as now proposed: and it is believed that the river may be further improved so as to make it navigable for keel and flat boats up to Shelbyville and above; and, indeed it has been remarked by many intelligent persons, that the quantity of water in this river has greatly increased since their knowledge of it; and they attribute it to the settlement and cultivation of the lands, which opinion is not confined to this river, but that it has become notoriously so with many other water courses in the western country since its first settlement and cultivation.

Whatever surplus of the present appropriation may be left in improving the river below Vandalia, can be applied in improving the river above, as far as it is susceptible, and the surplus funds appropriated may afford the means. This may be greatly facilitated by having the snag-boat and materials on hand with which to prosecute it.

The best season for prosecuting the proposed improvements, is from the 1st of September until the setting in of winter. During the winter season, little could probably be done, as the days are short—the probability that the river will be frozen over, and the weather too uncertain to keep laborers on wages to any advantage; and in the spring season, the frequent high rises would overwhelm the timber lying in the river, and inundate the shores so that all operations would be very liable to be repeatedly suspended until after the spring and summer floods subside. Should the plan of operations herein recommended meet with your approbation, it would be proper to draw out a plan and estimates for the boat and other equipments required, as early as practicable, as the proper season for operations is fast approaching.

I would here remark, and recommend, that steamboats intended to navigate this river should be so constructed as not to exceed 100 feet in length, and built considerably flat-bottomed, with a stern wheel in a recess. Such a boat would not probably exceed three and a half or four feet hold, and when loaded with sixty tons of freight, would not draw more than three feet of water. There are a great many short bends in the river, where it would be difficult for a boat differently constructed, when running fast, to turn round the bends without running against the banks. The greatest danger which I apprehend in navigating this river would be in time of high water. The water then, in many places, runs over the banks and through the timber, and across the bends, and it would then be difficult to prevent a boat from being drawn by the current over the bank into the woods.

In regard to the improvement of the river by means of slack-water dams, and procuring the most useful amount of water power to be created or rendered thereby to the State use, and the subject of mill-dams, bridges and viaducts, I refer you to the remarks and recommendations in the appenpix to the notes and estimates herewith submitted, considering any remarks upon these subjects, under present circumstances, to

be of a confidential character, and ought not to form a part of this general report.

Among the many great advantages likely to be gained by the improvement of this river, there are two worthy of remark: 1st. It will cheapen and facilitate the exports and imports of the people composing a considerable portion of the interior part of the State. 2d. It will bring into use and market large quantities of valuable timber which it would otherwise be difficult to get at.

It is a fact, generally admitted in the construction of works of internal improvement, that railroads and turnpikes afford the greatest facilities for rapid travel, and are best calculated for the transportation of light articles of commerce; and that sea, river, and canal transportation is cheaper, and best calculated for the transportation of heavy articles of commerce.

The greatest portion of exports and imports carried on by the people residing on the waters of the Kaskaskia river, is to and from St. Louis, Alton, and Chester. The price which merchants have to pay for wagonage from the Mississippi to Vandalia and Shelbyville, is from one dollar to one dollar and fifty cents per hundred pounds, or from twenty to thirty dollars a ton. At Carlyle, and vicinity, the price is about fifteen dollars a ton; and the other towns further down the river have to pay in proportion to the relative distance they are from the Mississippi. The distance from Vandalia to St. Louis is seventy miles. A keelboat, loaded with thirty tons of freight, could be propelled from Kaskaskia or Chester to Vandalia, by twelve hands, in ten days; these hands, including provisions, would cost about one dollar and a quarter a day each, making fifteen dollars a day expense for ten hands, equal to one hundred and fifty dollars for the voyage. Now, at the above rate of wagonage, this freight would amount to six hundred dollars, at least. A steamboat could afford to do it for much less than a keelboat; consequently, it is evident that all the heavy exports of produce would be carried on by the river, in steam, keel, or flatboats, and all the imports of groceries, salt, iron, &c., for the common consumption of the country, would be taken up by steam and keel boats, making a good profit on their voyages, vastly under the charges of wagonage, And the great abundance of timber would form an important article for consumption, as well to the contiguous prairies as for rafting to the waters below, where it would command a price and profit worthy of the enterprize of the people.

All of which is respectfully submitted.

I have the honor to be,

Very respectfully, your obedient servant,

WM. C. GREENUP,

Principal Assistant Engineer, Kaskaskia River Improvement.

My views accord with those in the above report, in regard to the practicability of the improvement, and the great advantages that will result from the same.

Respectfully,

SAMUEL BROOKE, Jr.

Assistant Engineer Kaskaskia River Improvement.

INTERNAL IMPROVEMENT OFFICE,
Belleville, July 24, 1838.

Col. WM. C. GREENUP,

SIR: Your report has been received, and it is with pleasure that I take this occasion to express to you, and those who accompanied you in the performance of the work in the survey of the Kaskaskia river, my entire satisfaction of the despatch with which the same was performed, and the ability and satisfactory manner in which your report explains the utility and practicability with which the navigation of the said river can be improved to the great advantage, especially of the citizens of Randolph, St. Clair, Washington, Clinton, Fayette, and Shelby counties; the good citizens of which cannot fail to be much gratified to learn that the time is fast approaching when keel, flat, and steamboats will be laden and unladen, both with the exports of their produce and the imports of commodities in exchange for the same, at the very door of many of their houses, and the villages which are and naturally will be stationed upon the banks of that ancient river, which has been so much overlooked by emigrants, and misrepresented (as to its navigation) by those whose *pretensions to science* were worthy of more correct views.

Your plan for improving the said river by superintendents, under the direction of a skilful engineer, meets my approbation, and will (baring accidents, if the stage of the water will permit) be put in operation by the first of September.

With sentiments of respect,
Your obedient servant,
WILLIAM KINNEY,
Acting Commissioner Second Judicial Circuit.

P. S.—I have no doubt but that the time will yet come when this subject will be placed in its proper light, in the halls of Congress, to that most honorable and enlightened body in the world, in a manner in which they will see the propriety, and have the magnanimity to grant to this State, either by donation of lands, or otherwise, an assistance for the improvement of that river, which, as I have before stated, was named after one of the "most patriotic and peaceful tribes of Indians, perhaps, that ever lived west of the Allegheny mountains;" of which the celebrated, talented, and great chief (*Baptiste Du Coigne*) named a son after Thomas Jefferson, as an evidence of his respect for the principles of our Government. W. K.

No. 5.

Copy of a letter written to each of the members in Congress from this State.

BELLEVILLE, *January* 20, 1838.

SIR: By a resolution of the Board of Public Works at their last meeting, I am requested and authorized to open a correspondence with our members in Congress, in respect to obtaining the passage of a law by that honorable body, to allow the Board of Public Works to have railroad iron for the internal improvement system of the State of Illinois imported free of duty. I beg leave, therefore, to call your attention to the subject; and notwithstanding there may be a general law *now* on that subject, *as some say there is*, yet you will see the propriety of a special law for our State, as our system of improvements is organized in a

manner to warrant safety to the Government, and put beyond doubt the purposes for which said iron would be imported by an agent of the Board, or on which a drawback would be allowed, if purchased in the United States, and thereby save the trouble of a compliance with the formalities that are generally thrown round a general law on such subjects, to guard against individual or company irresponsibilities.

Any information, therefore, as to the practicability and possibility, in your opinion, of the prospect of the passage of such a law, will be more than thankfully received, by

Your obedient servant,
WM. KINNEY,
President of the Board of Public Works.

No. 6.

INTERNAL IMPROVEMENT OFFICE,
Belleville, March 1, 1838.

DEAR SIR: Your letter of 5th ultimo, enclosing me a section of the law in relation to the importation of railroad iron, has been received, and the said section carefully examined. As our system of improvements adopted by the State is large and spacious, and will no doubt be carried into successful operation in due time, and as no doubt can be entertained of the full faith and intention of the State to use the iron imported under the direction of the Board of Public Works for said road purposes, it would therefore still appear to me that a special law of Congress, allowing an agent of the Board liberty to purchase or import all iron free of duty, intended as aforesaid, would be nothing more than reasonable, and a saving of considerable trouble to the Board, or agent, which they would be put to by a compliance with the formalities of the law as it now exists; and also the lying out of the use of the money paid until the iron was actually laid down on the rails. Certainly that enlightened and most honorable body, the Congress of the United States, cannot, or at least would not, if respectfully applied to, refuse to give some special encouragement to a young and patriotic State, which, like the State of Illinois, has, in a bold and enterprising manner, stepped forward to establish a system of internal improvements, which, if carried out to the full extent of the suitableness of such a system to the nature of her soil and geographical situation, will not only be a credit to the nation to which she is a birth child, but also cause her to shine as the morning star amongst her sisters in the far west.

With respect, your obedient servant,
WILLIAM KINNEY,
President of the Board of Public Works.

Hon. J. M. ROBINSON.

No. 7.

INTERNAL IMPROVEMENT OFFICE,
Belleville, February, 1838.

DEAR SIR: As Illinois has, at her last regular session, established, perhaps, one of the grandest and most splendid schemes of internal improve-

ments ever adopted by any State, and which is well suited to her locality, agricultural advantages, and the commercial necessities of the country, I would therefore suggest the propriety of the members in Congress from this State asking, from the General Government, a donation on each alternate section of the undisposed lands along all the projected improvements aforesaid; not only for the benefit of the State, but to facilitate the sale of the Government lands lying in the vicinity of said projected improvements, both of rivers and railroads, and particularly to aid in the completion of the great Central railroad, commencing at the mouth of the Ohio river and connecting with the Michigan and Illinois canal. Such a donation would be carrying out, to perfection, the same principle of national policy that actuated them to grant certain lands to aid in the construction of said canal, as the railroad connected with the same will open a grand chain of intercourse, in a commercial, agricultural and military point of view, with the northern, southern, eastern and western States. To such an improvement as that, the utility of which needs no comment, certainly no member of Congress could object, or refuse the aid of the General Government in carrying it out. It is useless, I presume, to say that Illinois is naturally destined to be the garden spot of the world, as respects agricultural pursuits. Her soil is alluvial, and groaning to be delivered, by the hand of the industrious agriculturist, of the immense wealth which it contains. She is a railway by nature, at least so far finished as a wagon wheel would be lacking only the tire, comparatively speaking, with other countries where railroads have been and are yet intended to be successfully and usefully constructed. What objection can the General Government have to give aid to such a system of internal improvements as Illinois has adopted, so suited to her in every point of view, and which, if successfully carried out, will place the whole system of national, agricultural, and military operations before the eyes of the world, in the attitude and beauty in which a lovely belle would appear before a large mirror?

It would appear to me that all that is wanting to obtain aid in the accomplishment of such a desirable object, both for the nation and this State, is to make an effort. A moment's reflection, by that most honorable body (of all national councils) the Senate and House of Representatives of the U. States, is only required to push the projected improvement, particularly that of the Central railroad, into complete operation; (the accomplishment of which will make the mouth of the Ohio and Mississippi accessible at all seasons of the year;) by which means the whole products for exportation can and will be thrown into market and scattered to the four quarters of the world, without being subject, as is frequently the case, to meet the competition of other States at the city of New Orleans, which have been prevented in the forwarding of their exports, either from the want of water or by being retarded by ice.

Your early attention to this subject will be well received by the Board of Public Works, and no doubt by the whole community which you represent, and more particularly by your correspondent and

Humble servant,

WILLIAM KINNEY.

President of the Board of Public Works.

Hon. A. W. Snyder.

A

AN ABSTRACT of the contracts let on the Western Division of the Great river, and the east

	Length in miles.	Contractor's names.	Date of contract.
West from Belleville.			
Section No. 1 - - -	2.00	Hugh Duffy,	Aug. 28, 1837
Bridging over Richland creek -	-	Same	Oct. 5, 1837
Section No. 2 - - -	4.00	Patrick Ryan	Feb. 19, 1838
" No. 3 - - -	2.00	John Thomas, jr.,	Aug. 28, 1837
American Bottom No. 4 - -	2.00	Winstanly & Duffy,	do.
American Bottom No. 5 - -	2.00	John Thomas, jr.,	do.
American Bottom No. 6 - -	2.50	Winstanly & Duffy,	do.
East from Belleville.			
Section No. 1 - - -	2.00	Dunn, Dwin & Co.,	Feb. 19, 1838
" No. 2 - - -	2.00	Same	do.
" No. 3 - - -	2.00	M'Cormick & Breman,	do.
" No. 4 - - -	2.00	Same	do.
" No. 5 - - -	2.00	John Thomas & Co.	do.
" No. 6, Silver creek bottom	1.00	Same	Oct. 15, 1837
" No. 7, Silver creek bridge	-	Same	do.
" No. 8, Lebanon -	2.00	Same	Feb. 19, 1838
East from Lebanon.			
Section No. 1 - - -	6.00	Mullegan & Co.	Aug. 16, 1838
" No. 2 - - -	4.00	Dunn & Co.,	do.
Sugar creek bottom - -	2.00	Same	Feb. 19, 1838
Sugar creek bridge - -	-	John Thomas, jr.,	Oct. 23, 1838
Section No. 3 - - -	7.00	Dunn & Co.,	do.
Shoal creek section - -	1.00	Baine & Wadkins,	Feb. 19, 1838
Section No. 4, Shoal creek bridge	-	Ferdinand Baine,	Oct. 23, 1838
" No. 5 - - -	4.00	M'Cormick & Co.,	Aug. 16, 1838
" No. 6 - - -	4.00	Same	do.
Beaver creek section - -	1.00	Isaac Demint,	Aug. 28, 1837
Carlyle section - - -	1.00	Groves & Schaffer,	Feb. 19, 1838
Kaskaskia bottom - -	1.00	Same	do.
Sections No. 7 & 8, Grand Prairie	21.00	Ferdinand Baine,	Oct. 23, 1838
" No. 9, 10, 11, 12, 13, & 14	14.00	Fitch, Case & Co.,	Aug. 16, 1838
Dum's creek section - -	1.00	Albright & Rodgers,	Oct. 7, 1837
Whole length of Mail Route -	152	- -	-

A.

Western Mail Route, between Illinois town, on the left bank of the Mississippi line of Marion county.

Engineer's estimate.	Amount of work actually done to December, 1838.	Probable amount of work to be executed.	Amount of per centage paid.	
$2,350 45	$5,876 60	–	$5,876 60	Finished and recorded
2,698 08	5,050 85	–	5,050 85	do.
3,473 37	See section 5	–	See section 5	do.
14,470 00	2,251 80	$14,000 00	1,688 85	
2,050 00	5,498 10	–	5,498 10	Finished and recorded
10,478 00	3,820 90	–	2,865 70	
3,182 81	7,378 93	–	6,903 00	
1,448 61				
1,131 17	4,789 00	–	4,345 12	
2,006 64				
1,530 88	2,070 86	–	2,070 86	Finished and recorded.
4,549 75	6,642 00			
856 00	1,000 00			
430 05				
1,640 80	Commenced			
2,010 84	Commenced			
3,594 00	2,125 00	–	1,700 00	
1,700 00				
1,476 00	Commenced			
1,965 11	3,308 34	–	3,308 34	Finished and recorded.
3,512 00	Commenced			
1,782 80	do.			
891 64	do.			
1,756 00	3,408 47	–	3,408 47	Finished and recorded.
4,000 00	3,501 69	–	2,636 20	
2,864 60	Commenced			
8,616 40	Commenced			
–	1,051 70	–	1,051 70	Finished and recorded.
$85,466 60				

Report of Edward Smith, Principal Engineer of the Southern District.

VANDALIA, *December* 3, 1838.

To the Hon. WILLIAM KINNEY,
President of the Board of Commissioners of Public Works.

SIR: I have the honor to submit to the Board of Public Works the following report, in relation to the several public works in the southern engineering district, showing their situation and progress up to this date.

SOUTHERN CROSS RAILROAD, FROM ALTON TO MOUNT CARMEL.

The graduation of the road-bed of the western and eastern divisions of this work, which was placed under contract in the months of February and March last, has been efficiently prosecuted, in the general, and is in a state of forwardness that gives a reasonable assurance of the final completion of this part of the work within the time limited in the contracts. The jobs recently let at the crossing of the Kaskaskia river, at Carlyle, and at the crossing of the Little Wabash river, in Wayne county, have been efficiently commenced by the contractors.

The contractor to whom was let the job of delivering the timber for the superstructure of the railway on the eastern division, commenced his contract in due time, but has been unfortunately retarded in his operations in consequence of the unusual drought which prevailed during the past season. A steam-engine, purchased in Ohio for the purpose of erecting a saw-mill, could not be shipped to its place of destination, and the water-mills upon which he relied for a portion of his supply of timber have been unable to operate. The hope is entertained that, so soon as these unavoidable causes, which he alleges have delayed his operations, are removed, his assurances, still to complete his contract within the time limited, will be fully redeemed.

The new contractor to whom was relet the superstructure of the railway on the western division, in the month of October last, has made arrangements to carry his job efficiently forward, and the utmost confidence is felt that he will give satisfaction to the Board, and to the community interested in the work.

The situation and progress of the several contracts are exhibited in detail in the tabular statements prepared for the purpose, and herewith submitted.

The detailed reports, estimates, and drawings upon which the several lettings have been had, and heretofore attested and filed, are respectfully referred to as exhibiting a full and minute description of these portions of the line.

The maps and profiles of the remaining portions of this line, explanatory of the experimental surveys, as well as those of the Belleville and Lebanon Branch railroad, are herewith submitted.

A considerable portion of the examinations and surveys of this road, from the Wabash westerly, were made in reference to a grade not exceeding thirty feet to the mile, and the residue of the line, including

the Branch road, in reference to a grade within forty feet. By a subsequent order of the Board, this original restriction was removed, and by adopting a grade above forty feet, but within admissible limits, at a few points where increased difficulties are presented, the original experimental lines will be greatly improved in point of distance, curvatures, and cost, without affecting the general utility of the road. The total length of the experimental line, from the bank of the Wabash to the bank of the Mississippi rivers, is 153 miles; but it is found that, by resorting to the modification in the grade above suggested, this distance can be reduced within 147 miles. The greatest elevation overcome is 220 feet above high water mark of the Great Wabash river, at the foot of the Grand Rapids, and 203 feet above high water mark of the Mississippi, at the city of Alton. This maximum elevation of country occurs on the dividing ridge between the waters of the Wabash and Kaskaskia rivers, in the county of Marion; and nearly the same elevation presents itself on the western extremity of the valley of the Kaskaskia, near the town of Edwardsville. The drainage of the whole State is intersected by this line of road nearly at right angles, and the profile will be found useful to the intelligent settler in seeking for a home on the lands of the General Government in that section of the State, should it be thought that the health of countries is governed by comparative elevation.

The river sections of this work between the city of Alton and Edwardsville—between Mount Carmel and Albion—and at the crossings of the Little Wabash and Kaskaskia rivers, now under contract, embrace the heaviest and most expensive portions of the road. It will be seen by the map, that a large portion of the residue of the line traverses an open prairie country, and its topography presents no extraordinary difficulty to the most economical construction of the road-bed. The average cost of the whole line, estimated upon data derived from the actual lettings and prosecution of the present contracts, and upon the present price of labor and provisions, is $8,200, per mile for the main line. The Belleville and Lebanon Branch road presenting less difficulties than the main line, is estimated, upon the same data, at $7,000 per mile. Its total length from the town of Belleville to its intersection with the main line, near Highland, is 23½ miles.

As capital becomes invested in the country and mills erected, the facilities of furnishing the timber for the superstructure of the railways and bridges will be greatly increased, and must materially reduce the cost of this part of the work. The supply of timber from the rivers where the road is commenced, and which it crosses in its route, may be considered inexhaustible; and when the machinery for its manufacture shall have been provided at those points, its cost must be lessened to an amount at least equivalent to the expense of transporting it on the railways to the interior of the State. So that it is fair to conclude that the cost of construction, as now estimated, will be found to be adequate and sufficient for the entire extension of the railways throughout the whole line.

Alton and Shawneetown Railroad.

The contracts for grading the Shawneetown division of this road, which were let in the month of March last, have been efficiently prose-

cuted, and the roads will no doubt be ready to receive the railway within the time prescribed in the contracts. The contracts for furnishing timber for the superstructure of the railway and bridges, and those for the erection of the depot buildings at Shawneetown and Equality, let at Shawneetown in September last, have been commenced, and the contractors are considered highly efficient and responsible. The prices at which the work on this road has been taken are lower, in the general, than those of any other works in this district, and perhaps in the State. This is to be accounted for from the superior advantages, which exist at this well known and important emporium on the Ohio river, in obtaining laborers and provisions; and it affords a most encouraging inducement for the rapid extension of the work into the interior from this point. Added to the above advantages, the liberal policy pursued by those having the control of the large banking capital at that point will, at all times, enable contractors to carry on their works with efficiency, certainty, and economy, and at the same time advance the best interests of the State in promoting the speedy and economical construction of her public works.

The contracts, embracing the graduation of three miles at the crossing of Silver creek, in St. Clair county, which were let at Belleville in October last, have fallen into the hands of responsible contractors, and the jobs have been efficiently commenced. The tabular statement, herewith furnished, will exhibit the present condition of these contracts.

The experimental survey of the whole line from Shawneetown to the intersection of the Alton and Mount Carmel road near Edwardsville, was made during the last season, and completed in the month of September, by Mr. Lathrope, the engineer on this road. Owing to the decease of Mr. Blanchard, the resident engineer, and the sickness of the assistants on the line, Mr. Lathrope's duties have been greatly augmented; and, in consequence, his report of this survey has been unavoidably delayed.

The distance by the experimental line, from Shawneetown to Edwardsville, is 147 miles. As the general character of the country is similar to that on the route of the Alton and Mount Carmel road, the cost of its construction will not exceed that of the latter, or $8,200 per mile. The report of the engineer in charge of the work is in a course of preparation, and will be submitted as early as practicable.

Alton, Hillsborough and Shelbyville Railroad.

At the session of the Board in the month of June last, this work was transferred from the western to the southern engineering district. At the time of its being so transferred, the examinations and experimental surveys were in progress, under the direction of Mr. Hawn, the senior assistant engineer in charge of the work. As it was desirable that the portion of this work then ordered to be placed under contract should be prepared for letting at the earliest day possible, Mr. Hawn was forthwith instructed to suspend the experimental surveys east of Hillsborough, and proceed immediately to the definite location of the western division of the work, and to prepare the same for letting. The topography of the country, on the direct line between Upper Alton and Hillsborough, presented extraordinary difficulties to the location of a useful and econom-

ical railroad, and consequently required that elaborate and skilful examinations should be made, in order to determine on the most judicious route to be adopted.

The line having been decided on, and the drawings and estimates prepared, the work on the first 13 miles from the city of Alton was let at Belleville, on the 22d of October last. The contractors, without exception, so far as I am informed, are considered to be highly responsible, and every confidence is felt that the work will be energetically prosecuted.

For further and full particulars in relation to this portion of the line, I beg leave to refer to the able and comprehensive report of Mr. Hawn, and the accompanying drawings and estimates heretofore filed.

The experimental lines have subsequently been extended to Shelbyville, but sufficient time has not elapsed to enable the engineer to prepare his report, to lay before the Board at their present meeting.

GREAT WESTERN MAIL ROUTE, BETWEEN VINCENNES AND ST. LOUIS.

The contracts let on this line of work have, with few exceptions, been as efficiently prosecuted during the past season as existing circumstances would admit. It will be recollected that the heaviest and most important jobs on this road occur in situations attended with more than ordinary difficulties in the prosecution of the work; and, at two points at least, are subject to periodical inundation. The extreme and continuous high waters in the spring and early part of summer arrested the progress of the work on the Purgatory and Little Wabash divisions: and the severe sickness at these points, as well as on the American Bottom division, which shortly afterwards prevailed, tended much to delay and almost to prostrate the operations of the contractors. After the sickness had subsided in the fall, the contractors at the two former points, and mostly on the whole line, excepting on the American Bottom, made a vigorous resumption of the work, and have, for the most part, urged forward their respective jobs with a reasonable degree of energy.

The tabular statements herewith submitted exhibit, in detail, the situation and progress of each respective contract on the whole line, and to which I respectfully refer for further information in relation to this work.

The experiment so far made in prosecuting the work at the Purgatory, Little Wabash, and American Bottom divisions of this road, is sufficient to show that the specific appropriations to be expended on these points are not sufficient to complete the work in the best and most substantial manner. The accumulated travel and transportation on the American Bottom division, which is now immense, and which must rapidly increase with the growth of the city of St. Louis, give intimations, which cannot be misunderstood, that the best interests of the State, as well as of the community immediately interested in the work, would be best consulted by making this portion of the mail route a road of the most perfect character. The same remark is strictly applicable to that portion of the line between Lawrenceville and Vincennes, commonly called the Purgatory division. It is therefore to be hoped that the Legis-

lature may be induced to afford the means of making the three important points above named as perfect as the importance of the road demands.

A considerable portion of the Purgatory division of the road is subject to inundation, from the circumstance of the Great Wabash river overflowing its right bank, some distance above the road, at a point called Bellegrave, and discharging a considerable portion of its volume of water over the extended low prairie, which has received the appellation of "Purgatory swamp." For a considerable time during the freshets of the Wabash river, this low prairie is inundated for many miles in extent, and the embankments are consequently much exposed, for weeks together, to the wash and waves of this wide expanse of water. In order to make a road of any permanency, the embankments must be protected from this annual cause of injury and destruction; which will very materially increase the cost of the work. In my opinion, the best mode of protecting this work would be to construct an embankment or levee at Bellegrave, and exclude the river from the prairie. It is entirely practicable to effect this valuable improvement at small comparative cost. A large tract of valuable and fertile arable land would be reclaimed by it, and the health of the country greatly improved. As much of this land now lies unoccupied and in the hands of the General Government, and perhaps will so remain until this improvement is made, it is fair to presume that proper representations, made to the authorities at Washington, of the situation of these lands, would induce a grant of at least a portion of them to the State, to promote this very desirable object.

Kaskaskia River Improvement.

For information respecting the situation and progress of this highly important improvement, I beg leave to refer the Board to the full and detailed report of Col. Greenup, the principal assistant engineer on the work, who has been specially charged with the operations on this improvement, under the immediate instructions of the acting Commissioner.

Little Wabash River Improvement.

My special report in relation to this improvement, made to the acting Commissioner in charge, in the month of November, is respectfully referred to, as containing all the information in regard to it, which was in my possession, up to that time. Subsequent to the date of that report, and up to the present time, the superintendent on the river charged with the removal of the timber obstructions, has been successfully operating with a party of energetic workmen; and if the river should keep down at its present stage for a month longer, and the operations are not too much retarded by the inclemency of the weather, as much cutting and clearing will have been done as it might be prudent to do in any one season of low water.

The superintendent has necessarily been made the disbursing officer on the work, and he is now present at Vandalia for the purpose of exhibiting his accounts for disbursements, and having them passed by the acting Commissioner; I, therefore, respectfully refer the Board to the report of the acting Commissioner for all information in regard to the expenditures on this work.

Having thus, in as concise a manner as possible, attempted a description of the practicability, probable cost, and present progress of the public works in the southern engineering district, so far as I have data in my possession, I will beg leave to submit a few remarks in reference to their general utility and probable prospects of producing a revenue to the State.

The Southern Cross railroad, from Alton to Mount Carmel and Shawneetown, traverses a country which presents a peculiar adaptation to agricultural pursuits, and is certainly calculated to sustain a very dense population. Deprived, however, as it is by nature, of those natural channels of communication with which the exterior and some portions of the interior of the State are so bountifully provided, its settlement has been retarded, and the advantages of its soil, its climate, and its valuable distribution of timber and prairie, have been, heretofore, measurably overlooked. But since these lines of communication with the navigable borders of the State have been projected, the country has risen in public estimation, and immense entries of the public lands, by emigrants and actual settlers, are rapidly being made. To show that these results are directly attributable to the prospect of these lands having an outlet to market, I will mention one fact tending to prove this position. It is this—that the settlement of the southern portion of the State, and particularly the entry of the public lands, are made, to the greatest extent, along our navigable rivers. There is not at this time, as I am informed, a single fraction of land lying vacant, from the falls of the Great Wabash, to the mouth of the Ohio river, which touches those streams; and it is well known that a considerable portion of the lands along this extensive river front is subject to occasional inundations and other obvious disadvantages. If, then, the advantage of having a communication to market is of so much importance to these lands, what may we not anticipate from those artificial lines of communication which afford an outlet for the produce of those beautiful and healthy prairies, so eligibly interspersed with groves of timber, and which hold out every inducement for their settlement by the industrious and intelligent agriculturist? From my own observations during the last two years, I have the gratification to believe that the settlements along and contiguous to the lines of these railroads will be exceedingly compact in a very short period, and that an immense amount of the heavy staples of the country—as grain, pork, and tobacco, which will not now bear transportation, on common roads, to market—will seek that market through these channels as fast as they can be constructed. In addition to these sources of revenue, the indispensable articles of consumption will be transported over these roads, from their emporiums on the Ohio, the Mississippi, and the Wabash, to supply the whole interior. Another source of immense revenue to the State, and of incalculable benefit to the citizens throughout the interior, is to be anticipated from the transportation of the salt manufactured near, and which must pass over the Shawneetown and Alton railroad. This source of business for this road alone, and disconnected with the immense amount of agricultural products and of travel which must pass over it, indicates, beyond a doubt, that this is one of the most important branches of the public works, both in point of productiveness and general utility.

The Southern Cross railroad to Mount Carmel having, in common with the Shawneetown road, the cities of Alton and St. Louis as one of its termini, and the immense water-power at its junction with the Wabash river, cannot fail to command its due share of transportation of produce and merchandize. In addition to this, it forms a part of a projected chain of intercommunication from the Mississippi river, via Louisville, Kentucky, to Charleston, South Carolina. If the amount of travel and transportation at this time, (to say nothing of its prospective increase,) which passes between the cities of Louisville and St. Louis, and via St. Louis to the upper cities and towns on the Mississippi, Missouri, and Illinois, by steamboats and otherwise, and which this overland communication must come into fair competition for, at all seasons of the year, and engross the whole of it during low water and ice, be taken as a basis of calculation, no one will pretend to doubt that this road will be largely productive of revenue. The connecting link in Indiana, 115 miles in length, which the Mount Carmel and New Albany Railroad Company has a liberal charter to construct in connection with the State of Indiana, has, at the last session of Congress, received the most favorable consideration of that body, and no doubts can be entertained of its simultaneous construction with the road in Illinois. At a point seventeen miles east of Mount Carmel, this railroad will intersect the great Central canal of Indiana, which extends from Evansville to the Maumee bay, on lake Erie. This line of communication to the lakes and New York is looked to with increasing interest by the citizens of Louisville, and will no doubt be duly appreciated by the citizens of southern Illinois.

The Alton, Hillsborough and Shelbyville railroad also terminating, at one end on the Mississippi river, at the city of Alton, and at the other at Terre Haute, Indiana, and traversing a country which is not surpassed in the whole State for the fertility of its soil and salubrity of climate, must be regarded as an improvement of great productiveness. At Terre Haute, it connects with the great canal system of Indiana, extending directly from that town to lake Erie, by the Wabash and Erie canal, and by the Cross-cut canal from Terre Haute to the great Central canal of Indiana. After reaching the Central canal, a direct communication is had with Louisville, by the Mount Carmel and New Albany railroad, with Evansville, on the Ohio river, and with lake Erie, by the Central canal. With these facilities of finding a variety of markets after reaching Terre Haute, the produce of Illinois cannot fail to be thrown upon this important road; and the introduction of merchandize from Louisville and the lakes, by the same route, will form another important item of transportation to swell the revenue of this work.

It is also worthy of remark that all of these roads in the southern district, as well as the other roads in the system, intersect the great Central railroad leading to the mouth of the Ohio. It occurs to me that a little reflection will show that, in consequence of this direct and uninterrupted line of communication with the mouth of the Ohio, and thence with the southern market, the revenue to be derived from *all* the roads in the State must be greatly augmented; for as the produce from every quarter of Illinois can, by these means of inland communication, be sent to the southern market, when the exports of Indiana, Ohio, Kentucky, and Missouri are locked up with the frosts of winter or the droughts of sum-

mer, (and consequently at a time when there is the least competition in market,) a large portion of our exports, which would otherwise float upon our rivers, will be thrown upon the line of the public works. Hence it will almost universally happen that the interests of the citizens will be best promoted by promoting the interests of the State, in giving their business of transportation to her public works. This reciprocity of interests between the State and her citizens, whilst it tends to augment the business on the works, will enable the State to keep the tolls within reasonable and popular limits, as they will always bear reduction in proportion to the amount of business the roads perform. Regarding our system of railroads in this point of view, and considering them as forming great and important mail routes, and inducing, by their greater expedition and safety, an incalculable amount of travel as well as transportation, I cannot but believe that they will, in point of fiscal importance, disappoint their most sanguine friends.

All are free to admit the great importance of improving the channels of our rivers, and I have ever regretted that there were not more of these important lines of communication embraced in our system of internal improvements. The cheapness with which the products of the interior can be transported to market on these natural channels of commerce, form a great saving to the producers who live contiguous to them. All the rivers and their tributaries which penetrate the interior of the southern section of the State abound with timber, of the finest quality, for the construction of boats suitable for the descending trade. These boats are usually built by the farmer with the force employed on his farm, and being loaded and ready for the voyage, are sent off by the first rise of waters in the spring, that he may return in time to put in his crop. In every point of view, casualties and delays are vastly detrimental; and having necessarily to submit to the disadvantage of going to a glutted market, it seems but an act of justice for the State to remove, as far as practicable, all obstacles to the safety and expedition of the voyage.

There are many of the rivers, which the public good requires should be improved, from which no revenue can ever be expected. But the system of *river improvements* should, in a fiscal point of view, be regarded collectively. If the rivers in the southern section of the State should be taken together, the profits of the water-power, on a few of them, would be amply sufficient to remove the obstructions in all the residue. Thus, the water-power at the rapids of the Great Wabash river, which is equivalent to at least 300 run of 4½ feet buhrs, would, at the rates at which these privileges are rented in Indiana, produce an annual income to the States, of $45,000, in addition to the tolls received for the transit of the immense trade of that river. In addition to this river, the improvements on the Little Wabash will afford a large and profitable amount of water-power, and the Kaskaskia and Big Muddy rivers would assist in swelling this source of revenue. Besides the direct revenue to be derived from the water rents and tolls themselves, these works would indirectly tend to augment the business of the railways leading to and from the points where these water-powers are created.

This hasty glance at the river improvements is sufficient to show that, taking all the rivers together in the southern district of the State, the

whole could be improved, and collectively made to produce a handsome profit to the State. So, I presume it will be found in other sections of the State—as the Rock river, the Kankakee, the Vermilions, the Fox river, and various others, would, if properly improved, produce a surplus of revenue that would be sufficient to improve all the rivers in their respective districts of country, from which no profits in rents or tolls could be derived.

As it is the peculiar province of an engineer to confine himself to the practicability of public works, and leave their expediency to others, I will digress no further.

On retiring from my connection with the public works, permit me to tender through you, to the Board, my sincere acknowledgments for their confidence and kind indulgence extended to me during the time I have had the honor to be in their employment, and allow me, on this occasion, to express my best wishes for the ultimate success of our system of internal improvements—a system of State policy which, I have ever firmly belived, is calculated, with judicious management, to place Illinois, in a very few years, on a footing with the most favored State of this Union, in point of population, intelligence, enterprise, and substantial wealth.

With sentiments of high respect, I have the honor to be, sir,

Your most obedient servant,

EDWARD SMITH,

Principal Engineer of the Southern Engineering District.

INTERNAL IMPROVEMENT OFFICE,
Belleville, October 22, 1838.

DEAR SIR: I have the honor to lay before you the report of Mr. Frederick Hawn, senior assistant engineer on the Alton and Shelbyville railroad, in relation to the preliminary examinations and definite locations of the western division of that line of work.

As stated to you in a former communication, I concur with him in opinion, that the northern, or prairie route, for this road, is the most judicious for the interest of the State, and for the effective usefulnes of the work when in operation; and have no hesitation in again recommending its adoption.

I take great pleasure in stating that I believe Mr. Hawn's report fully entitled to your confidence; and that his exertions to discharge the responsibe duties assigned to him, entitle him to the thanks of the whole community, and especially of the officers under whose directions his services were rendered.

Very respectfully,

Your most obedient servant

EDWARD SMITH,

Principal Engineer.

Hon. WILLIAM KINNEY,

President of the Board of Public Works of the State of Illinois, and Acting Commissioner of Second Judicial Circuit.

Report of Mr. Frederick Hawn, Senior Assistant Engineer.

INTERNAL IMPROVEMENT OFFICE,
Belleville, October 20, 1838.

TO EDWARD SMITH, Esq.
Principal Engineer of the Southern Engineering District.

SIR: Conformably to the instructions of Col. McConnel, Commissioner of the Board of Public Works of the State of Illinois for the first judicial circuit, I proceeded with my corps of engineers to the city of Alton, to take charge of a survey of the Alton and Shelbyville railroad. I arrived at my place of destination about the 15th day of April, and reported myself to Gov. Kinney, President of the Board of Public Works and acting Commissioner for the second judicial circuit, to whose charge a part of this work is confided. This work being at that time under the direction of the chief engineer of the western district, he gave me no specific instructions in regard to the mode of operation, except the established precedents of the district, and the law established to maintain a system of internal improvements. On the 8th day of June I received notice from the Secretary of the Board of Public Works, that this work was transferred to the southern district, and that I should report to the chief engineer thereof; and in pursuance with the above notice, I now offer the following detailed report.

By reference to a map of the country included in the general route from Upper Alton to Hillsboro, two definite routes present themselves, to wit: one on a direct line, crossing the east and west branches of Wood river, which may properly be termed the southern route, and one heading those streams and their tributaries—(except Coal branch)—the northern route. They encounter much broken ground for several miles in the advance Upper Alton, particularly that portion of country in the immediate vicinity of Coal branch. This stream rises about three miles west of Upper Alton, and flows in a southeastern direction, and forms a confluence with the west branch of Wood river, one mile north of Upper Alton. It has many tributary branches, which have indented the surface into numerous and formidable ravines, extending in various directions. Many of these have their sources within a few hundred feet of each other, running in nearly opposite and sinuous directions, so much so that it is impossible to approach the main branch without encountering some of those obstacles.

From these facts, I deemed it impossible to come to any accurate conclusions in reference to the most feasible part of the country in the vicinity of this branch by reconnoissance; inasmuch as the feasibility of a line would frequently be affected by running a few hundred feet to the right or left. In order to facilitate operations, by superseding the necessity of projecting many random lines, and gain a thorough knowledge of the situation of the obstacles to be encountered, I thought it expedient first to make a topographical survey and map of the country bordering upon this stream to the west branch of Wood river, including the probable crossing of that stream. This work having been sufficiently extended, I commenced an examination of the

Southern Route, beginning at Upper Alton.

The most populous part of the town is situated on a ridge commencing in the bluffs of the Mississippi and extending about one and one-fourth of a mile in a northern direction; thence curving gradually towards the west for one mile and a half, where it unites again with the bluffs of the Mississippi and the table lands. In its northern course it is skirted by the ravine of Shields' branch on the west, and the valley of Wood river on the east and southeast; in its western course, by the tributaries of Shields' branch, Piasa, and the Mississippi on the south, and by Coal branch and its auxiliaries on the north. This ridge is elevated from 116 to 184 feet above the Alton and Mount Carmel railroad, immediately east of Shields' branch, and from 100 to 168 feet above the bottom of the valley of the west branch of Wood river.

The portions of country having different localities are described by different base and diverging lines. The examinations made between Upper Alton and Wood river are represented by four lines, viz: base line No. 1. and diverging lines, Nos. 1, 2, and 3.

Base Line No. 1.—This line commences nearly opposite Mr. Debow's dwelling, at station 70, on a line run by the chief engineer of the western district, in a survey made by him in August of last season. From this point the line was extended in a direction to and entering Main street on the old public square; thence passing through the most populous part of this street, it enters valley (A); thence running down this valley to its confluence with Wood river—making a distance of nearly three miles. The first obstacle I encountered, worthy of note, is the undulating surface of the street, which would require alternate cutting and filling, the slopes of which would extend, in many instances, far beyond the limits of the street. In entering the valley, a cut of 28 feet would occur, which would extend back to near Seminary street. The valley through which the remainder of the line passes is badly situated for the economical construction of the proposed work. Its direction is nearly at right angles with Main street, and the curving to overcome the consequent angles would be confined to a short distance, making the radius of curvature about 750 feet; which is the more objectionable, in consequence of its occurring on a plane having an inclination of 71 feet per mile, which is necessary to overcome the depression of the valley of the river. Being aware that the graduation of this line would wholly destroy the usefulness of Main street for ordinary purposes, and the many other objectionable features connected with it, induced me to consider this line wholly inexpedient.

Line No. 1.—This line commences at the same point with the base line, where I made an offset of fifty feet to the right, and thence projected it in a due course to the west branch of Wood river, touching that stream at a point about 500 feet above the Woodburn and Hillsboro roads. This line passes over the southeastern extremity of the town plat of Upper Alton; crosses the Hillsboro road near the bluff of Wood river; and crosses the base line at station 150, in valley (A.) The examinations made by this line were not very satisfactory, it being impracticable to reduce it to a grade less than 70 feet per mile, and even this gradu-

ation would be attended with an unwarrantable expense; which induced me to run—

Line No. 2.—This line commences on the bank of the west branch of Wood river, 350 feet west of the termination of line No. 1; crosses the point of a ridge formed by the valley of the west branch of Wood river, and valley (A;) thence crossing this valley by ascending the bluff through a small ravine or depression; thence crossing line No. 1 at station 56; thence continuing the tangent to about 1000 feet southwest of the Milton road, where I commenced a cycloid on a radius of 1400 feet, and continued it 1500 feet, terminating on a ridge formed by the ravines descending into the valleys of Wood river and the Mississippi; thence a tangent intersecting at station 4 of the base line. The length of this line is one mile and three-fourths, and is decidedly preferable to line No. 1, in consequence of the advantages furnished by a small ravine in the bluffs of the river, which would reduce the cutting materially; and as this line avoids coming in contact with the summit ridge so soon by its running further south; and as it crosses some extensive ravines, which also would aid in reducing the excavation necessary to bring the line to the most eligible grade.

Not being wholly satisfied with the examinations already made, I therefore proceeded to the examination of another route, the result of which was ascertained by

Line No. 3.—I commenced this line at station 18 of line No. 2, and projected it in a due course to the public square in Upper Alton, and intersected the base line near the post office. The length of this line is one mile, and would require a grade of 73 feet per mile, with expensive grading, of which the cuts would predominate, and the greatest portion of which would occur in gaining the summit in Upper Alton. These obstacles, together with the abrupt curvature necessary to overcome the consectary angle—the buildings which must consequently be removed, to the serious disadvantage of the owners, without affording them any adequate benefits—and the reason (equally applicable to all the foregoing lines) that they pass through the town with a steep grade, either from 3 to 15 feet below, or 5 to 58 feet above the surface of the streets, render this line very objectionable.

Recapitulation.—Having thus carefully made an instrumental examination of all the ostensible routes between Upper Alton and the west branch of Wood river, and given a detailed description of all the lines projected during the examinations, you will be enabled at once, with the aid of the profiles and topographical map, to discover that line No. 2 is the most eligible. To the facts already adduced, I will add some by way of illustration. The valley of Wood river is situated about 100 feet below the most populous part of Upper Alton; and to overcome this depression with a grade of 40 feet per mile, would require a distance of two and a half miles. By referring to the map and profiles, you will perceive that the distance on all the lines, including the descent into the valley, fall short by more than one half; and to remedy this defect, it will then be necessary to make a deep excavation at the commencement, and high embankment at the termination of the slope of the side of the valley. The line which has the greatest facilities for this is the most feasible.

These advantages are gained in part by adopting line No. 2; inasmuch as the elevation of the summit ridge is considerably less, and is comparatively narrowed by the proximity of the ravines of the valley of the Mississippi to those of the valley of Wood river. But it would not be advisable to adopt a grade less than 52 feet per mile, and it would be wholly impracticable to reduce the line to a grade of 40 feet per mile. With these remarks I leave this part of the subject, by stating that line No. 2 was adopted for an estimate of this portion of the route.

After concluding these examinations, I next turned my attention to that portion of country immediately east of the west branch of Wood river. From a reconnoissance, I ascertained that there was no probability of finding any thing like a feasible route on a direct line to Hillsboro in consequence of the numerous ravines and ridges of the east and west branches of Wood river and their auxiliries; all of which form obstacles too formidable to be overcome with a reasonable expenditure, if not wholly impracticable.

In proceeding with the instrumental examinations, the first material obstacles presented are the bluffs on the east side of the west branch of Wood river. I examined five routes to the table lands—three on the north and two on the south of the Carlinville road, to wit:

Base Line No. 2.—This line commences at the termination of base line No. 1, and runs in the direction of the Carlinville road across the river bottom to the bluff; thence up ravine (B,) situated between the Carlinville and Hillsboro roads; thence on the dividing ridge between the east and west branches of Wood river, in the vicinity of the Carlinville road, passing Mr. Gray's plantation, Indigo prairie, and terminating in the edge of Smooth prairie, a distance of 5.03 miles. The first object to be considered on this line is the crossing of the west branch of Wood river. The width of stream varies from 50 to 75 feet from bank to bank, and I have taken great care to ascertain the quantity of water discharged through its channel, and am under great obligations to Mr. David Miller (who has been familiar with its different stages for a number of years) for much valuable information. I have estimated the requisite span for a bridge at 100 feet which will be ample to discharge the water in its highest stages. The foundation for the abutments will be precarious. Superficial appearances indicate a diluvial sand. I had no instruments suitable for making examinations very far below the surface; but, judging from the geological formation of the vicinity, little else can be expected than is indicated by the surface. The bed of the stream is twenty-two and a half feet below the grade line, requiring abutments of nearly that height, exclusive of the depth necessary to excavate for a foundation. Abutments of this height and space will require a thickness of 10.5 feet at the bottom, and 3.75 at the top, with requisite offsets and slope. Stone of an exquisite quality may be obtained within 2.75 miles. In the estimate of cost of the superstructure of this bridge, I adopted Col. Long's latest improved plan. An abundance of good timber is growing in the immediate vicinity; and sawed timber, of such quality as the country affords, (of which I conceive black walnut to be the most preferable,) can be obtained at the city of Alton—a distance of four miles. In crossing the river bottom, nothing extraordinary occurs. It is 1500 feet in width, and lies wholly on the east side of the stream;

but a small portion of it is ever inundated, and it is heavily timbered with white oak, sycamore, elm, black walnut, &c. Upon leaving the river bottom, ravine (B) presents itself. This ravine is 1,300 feet in length, and rises forty-eight feet, which will consequently require a cut of nineteen feet at the head, and a corresponding fill at the termination, to reduce the line to a grade of 55 feet per mile, which is the most eligible. The excavation will not be very lengthy, in consequence of a favorable feature in the surface, in the advance; but the embankment will extend across the river bottom, and most of the material for forming it must necessarily be brought from the excavation and the bluffs, which will render it expensive. The ridge over which the remainder of this line passes, divides the waters of the east and west branches of Wood river. It is from a few hundred feet to half mile in width, and is elevated from 48 to 122 feet above the valley of Wood river at the point of crossing. Its inclination varies from 16 to 39 feet per mile, and the general direction is straight, deflecting about twenty degrees from a tangent to Hillsboro. The line necessarily crosses the heads of some ravines, but they are generally narrow, and most of them not very deep. The most of the ridge is heavily timbered with white oak and black oak, &c., and the soil is well adapted to the construction of a railroad. I may here add that, after the examinations of the country included in the base line were completed, it was also found to be the most feasible, and was taken to be the basis of the estimate for this portion of the route.

Proceeding with the examination, I next ran—

Line No. 1, commencing at station 197 of the base line. I ran down ravine (C,) and terminated on the river bottom, one-fourth mile west of the termination of ravine (B.) The ravine through which this line passes is situated on the west side of the Carlinville road, and forms an angle of 35 degrees with the base line, and is 1,600 feet in length. It heads within 200 feet of ravine (B;) is sinuous in its course, and consequently not so well adapted to the location of a railroad as ravine (B.)

Line No. 2.—This line commences at the termination of line No. 1, and continues around the point of the bluff upon which J. Moore's dwelling is situated; thence entering ravine (D;) thence continued up this ravine to its head, terminating at station 219 of the base line, one-fourth of a mile north of Dr. Haskill's cabin. The objections to line No. 1 apply in a greater extent to this line.

Line No. 3.—This line commences at station 52 of line No. 2, and runs along the foot of the bluff to ravine (E) of Long branch; thence up this branch to its head, near Mr. Lee's dwelling; thence in an eastern direction to the Carlinville road, terminating at station 344 of the base line—a distance of 4¾ miles from the point of crossing Wood river. This ravine is nearly one and a half miles in length, and is situated nearly parallel with, and about three-fourths of a mile west of the Carlinville road. The ascent is very uniform for one mile. It then increases, and becomes very abrupt before it reaches the table lands; which remark is also applicable to most of the ravines bordering on the Mississippi and Wood rivers. Its general direction is tolerably straight, requiring no very abrupt curves. Its mouth is situated about one mile from the point of crossing the west branch of Wood river; but the projection of bluff intervening, or projecting west of the two points, would require reversed

curvatures of short radii, in order to avoid recrossing the west branch. Notwithstanding the greater length of this ravine, it does not afford a more eligible grade to the table lands than that of the base line. It will be seen that this ravine is situated nearly parallel with, and forms a part of the dividing ridge over which the base line passes; which ridge rises from 16 to 39 feet per mile; and, at the junction of line No. 3 with the base line, attains an elevation of 122 feet above the river bottom, at the point of crossing the stream, and 116 feet above the mouth of the ravine; which cannot be overcome with a grade less than 69 feet per mile. The cost of graduation would also be more expensive than the base line, the greater portion of which would be incurred in the extensive cuts and fill at and near the head of the ravine.

Line No. 4 commences at station [2 i] of topographical line [a]; from thence it runs up ravine [F,] and terminates at station 204 of the base line. The main trunk of this ravine is situated south of the Hillsboro road, and heads between that and the road leading from Alton to Carlinville. It is three-fourths of a mile in length, and ascends 75 feet; the most of which is acquired in the last fourth of a mile, which renders it impracticable to apply an economical grade. The general course is badly adapted to the lateral position of the line. It would require an extensive reversed curve from the point of crossing the west branch (which is arbitrary) to arrive at the mouth of the ravine; and in this course the river is necessarily crossed twice; which would lead to the necessity of constructing two extra bridges, or to turn the stream from its present channel. These objectionable features render this line also inferior to the base line.

By a critical examination of all the probable routes by which a transit from the valley of Wood river to the table lands could be effected, the result was not very favorable; but in point of economy and practical utility, I assumed the base line as decidedly the most favorable for making estimates. In continuing the examination in the advance, I next extended

Base Line No 3.—This line includes the crossing of the east branch of Wood river, and commences with a cycloid, on a radius of 1,900 feet, at the termination of base line No. 2, and runs diagonally across the southeast portion of a plantation, and enters ravine [G;] thence down this ravine to the junction with the valley of the east branch of Wood river; thence across the river bottom to the stream crossing it, one-fourth of a mile below the union of two branches of nearly equal size, and about two miles below the bridge of the Alton and Carlinville road, over the western branch; thence crossing a point of a projecting ridge, and entering ravine [H.] situated nearly parallel with the eastern branch of the stream; thence up this ravine to its source near Mr. Pruett's dwelling; thence through the edge of barrens to Esquire Tindall's, in the edge of Dorsey's priarie—a distance of 4.25 miles. This prairie is formed by the timber on Paddock's and Indian creeks, on the east and southeast; and by the timber on Wood river and its tributaries on the southwest and west; and unites with the Macoupin prairie on the north. That part of it lying north of the base line is wholly drained by Indian creek and its branches. They extend in various directions; and many of them have their sources within a few hundred feet of the valleys of Paddock's creek and the

auxiliaries of the east branch of Wood river. So much of the general route as is included in this line is far better than could have been expected, when the general features and topography of this portion of the country is considered; and the result of the examinations demonstrates that it is the only point where a crossing of the east branch of Wood river can be effected with a grade less than 85 feet per mile, without incurring an unwarrantable expense. The descent into the valley of the east branch of Wood river, on the west side, is moderately uniform; but in consequence of the serpentine course of the ravine through which the line passes, several points of bluff must necessarily be cut, thereby swelling the expense of graduation to no very inconsiderable sum. There will be two reversed curves with radii of from 100 to 2,500 feet, which will be objectionable in consequence of their occurrence on a plane having an inclination of 56.49 feet per mile, and 1.30 miles in length from the foot of the bluff to the stream [which washes the opposite bluff;] the river bottom is 600 feet wide, and is inundated in times of freshets. The stream is favorably situated for the construction of a bridge. The bank or bluff on the east side is 20 feet high and firm, with a rock foundation. On the west side the bank is low and of an alluvial sand; but I doubt not but a rock foundation can be obtained by excavating a few feet below the bottom of the stream. The abutments on the west side will be about 17 feet in height, and that on the east side 14 feet high. I have estimated the span for a bridge at 80 feet, and in the estimated cost of superstructure, I adopted a plan detailed by Samuel Brooke, jr., assistant engineer in my corps. There are indications of stone within two miles; but their geological character is such that would not warrant an adoption in the estimated cost of masonry. I have therefore founded my estimate on the probable necessity of procuring them near the city of Alton, a distance of 11 miles. Good timber is growing within one mile; and sawed timber at present can only be had by hawling it 10 miles. In crossing the point of a ridge a cutting of 8 feet will occur, which can be favorably disposed of in the construction of the bank required across the valley. The ravine on the east side of the east branch, through which a transit to the table lands is effected, varies but little from that on the west side. The plane adopted is 1.40 miles in length, and ascends at a rate of 55 feet per mile. Nearly the same proportion of curvature will be required but on greater radii; all of which will exceed 1,500 feet. From the termination of the ascent to Esquire Tindall's, the line crosses several extensive ravines, but it can be so modified as to render them of little consequence.

Having thus been carried nearly three miles north of a due line of the proposed route in search of a practicable one—but having examined instrumentally every ostensible practicable feature in the country, I hesitate not to say that a more favorable one cannot be found on a more direct line. After coming to this conclusion, my first object was to ascertain if the residue of the route could not be found on a more direct line. I accordingly ascertained the bearing of a due line to Hillsboro, and extended with that course—

Base Line No. 4.—It commences at the termination of base line No. 3, and curves with a radius of 2,000 feet, until the requisite course

was obtained; thence continuing that course to the east side of the west branch of Cahokia creek—a distance of 8.64 miles. This line, in its extension, crosses Indian creek, Paddock's creek (one mile below head of its timber,) three branches of Sweet's creek, and the west branch of Cahokia, all of which, except Indian creek, are tributaries of Cahokia. Most of these streams have extensive valleys, skirted by counter ravines, of auxiliary branches, requiring extensive cuts and fills, and mechanical structures; so much so that it would swell the expense of graduation to an unwarrantable sum. Although this line is direct and practicable, as far as my examinations extended; yet I considered it my duty to examine still farther north for a more eligible route. I became more impressed with the necessity of this course, from a subsequent reconnoissance of the surrounding country. I found that the obstacles passed, formidable as they were, would be very inconsiderable when compared with those yet to be encountered in the crossing of numerous other streams, if the line should be extended. I likewise ascertained that the large prairie on the north, situated between the timber bordering on the Mississippi and the Macoupin creek, to the head of the main or east branch of Cahokia, was remarkably smooth, and admirably adapted to the economical construction and durability of the proposed work. The general surface is an extensive plane, descending south and west, with a dry soil, slightly undulating, affording great facilities for properly draining a road; and, by adopting it, most of the streams would be headed, or rendered but of little consequence. But to make these ostensible advantages available, it becomes necessary to diverge several miles north of an extension of the base line, [No. 4] and arrive at the extreme northing, at the head of the timber on the east branch of Cahokia, within 12 miles of Hillsboro, making the total amount of northing from a direct line, about 9 miles. It was desirable to avoid so great a digression from a direct line, if it could reasonably be accomplished. I accordingly availed myself of a part of the advantages presented by this prairie, in heading some of the streams, and then pass off in a direct line to Hillsboro, after making about three miles northing. In these examinations I extended three lines, viz: line No. 1, the middle line; line No. 2, the northern, and modification of line No. 1; and line No. 3, the southern, or most direct route.

Line No. 1 commences at station 8 of base line No. 4, and terminates on the east side of the west branch of Cahokia, a distance of 8.06 miles. It passes, in a northeastern direction, through Dorsey's prairie, touching the farm of Mr. Jones; thence crossing the line between Madison and Macoupin counties; thence through the plantation of Mr. Town; thence crossing Indian creek; thence passing 400 feet west of Mr. Lovell's dwelling, terminating the tangent west of Bunker's hill, where a curve commences, with a radius of 2,000 feet, and continues until a tangent was obtained that would touch the head timber of the west branch of Cahokia, and extended to that point, crossing Paddock's creek at a favorable point, one half mile above the head of the timber. By referring to the topographical map, you will perceive that this line is much preferable in point of profile to the one having a direct course; and the quantity of northing made from the direct line is nearly three miles, the most of

which is obtained in passing through Dorsey's prairie, which I attempted to avoid in a subsequent examination, hereafter detailed under the head of line No. 3.

Line No. 2 commences at station of line No. 1, and continues the curve of that line until the course of a tangent was obtained that would more effectually head some of the branches of Indian creek and pass over better ground, connecting with line No. 1, directly west of Bunker's hill. This line is situated on the north line No. 1, and diverges about one-fourth of a mile from it. It was taken in connection with line No. 1, from the point of intersecting for estimating the cost of so much of the general route lying between Esquire Tindall's and the west branch of Cahokia.

Line No. 3 was extended, with a view of obtaining a more direct route, by passing on the south side of Bunker's hill, and more gradually acquiring the northing, which must necessarily be made, to avoid the obstacles mentioned in a detail of base line No. 4.

I ascertained by these examinations, that the distance would be somewhat shortened, but at the expense of a greater proportion of curvature, which induced me to give a preference to the line mentioned in a detail of line No. 2.

Having thus rendered the advantages available heretofore referred to, by heading most of the streams encountered in the extension of base line No. 4, I made an unsuccessful attempt to pass in a direct line to Hillsboro; which is detailed in

Base Line No. 5.—This line commences at the termination of diverging line No. 4, of base line No. 4, and terminates on the east side of the east branch of Cahokia creek. In its extension, Bear creek, Brush creek, and several other branches, together with the main stream of Cahokia, were crossed; many of which have extensive vales, with counter ravines, and other depressions, forming formidable obstacles to overcome in the construction of the proposed work, and would swell the expense to an unwarrantable sum. During these examinations I ascertained that a better route could be obtained by extending the tangent (line No. 1 of base line No. 4) between Bunker's hill and the head of the west branch of Cahokia. I accordingly extended it with

Line No. 1, commencing at the same point with the base line (No. 5) and terminating on the east side of the east branch of the Cahokia, on the meridian with, and 1½ miles north of, the base line; yet the obstacles encountered fully justified an examination still further north, which resulted in the adoption of the prairie route entire, as heretofore described, and the result detailed in

Line No. 2, commencing within 1½ miles of Bunker's hill, at station of line No. 1, base line No. 4, and terminates on the east side of the east branch of Cahokia, near the head of its timber, on the meridian of the base line, and 1½ miles north of line No. 1. It passes through the centre of Macoupin prairie, about 10½ miles south of Carlinville, the seat of justice of Macoupin county. It heads all the streams, except the east branch of Cahokia, and the indentations of it are so contracted at the point of crossing that it is of but little consequence. The only objection that can be urged against this line is the quantity of northing it makes; but from the thorough examinations made, both instrumentally and otherwise, I can safely say that no route can be found, combining so many advan-

ages, further south, after entering Dorsey's prairie, than the one detailed under the head of line No. 1, in connection with line No. 2, of base line No. 4, and line No. 2, of base line No. 5. This point of crossing the east branch of Cahokia is imperative.

Having thus pushed the investigations to a point within twelve miles of Hillsboro, and on a line due west from that town—and having been carried so far north, with the knowledge, too, that no feasible route could be obtained further south, it occurred to me that a route might be discovered which would avoid the sources of Wood river, and, consequently, the heavy work in crossing the two branches of that stream, together with the steep grades required in approaching and leaving the same. The sources of Wood river being also considerably south of this point, it was evident that a line to Upper Alton, avoiding the waters of Wood river entirely, would not greatly increase the distance beyond the line already run. I therefore proceeded to make an instrumental examination in this direction, the result of which is detailed under the head of

Northern Route.

I commenced the examination of this route at station No. 272 of diverging line No. 2, base line No. 5, and projected it in a course south of west, for 5.23 miles. I then ascertained that if the line was extended it would cross the numerous tributaries of the main branches of Wood river and their indentations, which it was necessary to avoid. I therefore made an offset of 5,000 feet to the north, and ran a line with a course which, if projected eastwardly, would touch the point crossing the east branch of Cahokia, which is imperative on the southern route—this line was then extended westward for 5.10 miles, when it became necessary, from the excessively broken character of the country, to return 2¼ miles to station 380, and make another offset of 4,000 feet to the north, and then run with a similar bearing of the last line, which avoided the heads of all the auxiliaries of Wood river, except three small branches, and brought me near Brighton, crossing one of the branches of Piasa creek. From a reconnoissance, I now ascertained that, from a point heading all the branches of Wood river, a straight line might be obtained to the point heretofore referred to, twelve miles west from Hillsboro, on the southern route, a distance of 23.63 miles. This line would pass through Macoupin prairie, near points of timber on some of the branches of Macoupin creek, and within 8½ miles of Carlinville. Upon this line I founded the estimated cost of this portion of the route. Although it was not actually traced, yet the requisite knowledge has been obtained from the lines running parallel to it. From the point near Brighton, I extended the line to Upper Alton, passing down on the west side of the west branch of Wood river, on the dividing ridge between that stream and Piasa creek, cutting the southeast corner of Greene county, passing through Scarritt's prairie, one-fourth of a mile east of the Monticello Female Seminary; thence to Coal branch, crossing it one-fourth of a mile east of the Carrollton road; thence to the ridge heretofore described, upon which Upper Alton is situated, gaining its summit near the fork of the Upper Alton and Coal branch road; thence on the ridge to Upper Alton, passing through Liberty and Manning streets of that town;

and terminating at the beginning of the southern route heretofore described—a distance of 12 miles. From Brighton to Coal branch the line is remarkably favorable; the surface is slightly undulating, and a dry soil, affording good facilities for draining the road. A part of it is partially timbered with black oak, and the greater portion of Scarritt's prairie is under a high state of cultivation. Coal branch and the broken country in the immediate vicinity are the greatest obstacles encountered on this route. But by the aid of the topographical map, a judicious point for crossing it was readily selected. The valley is 400 feet wide, and will require an embankment of 43 feet at the deepest point. It is situated immediately at the foot of the slope, and forms a part of the ridge upon which Upper Alton is situated; the summit of which is gained by a plane of 3,600 feet in length, with an acclivity of 39.35 per mile, which renders it necessary to cross the valley at so great an elevation. After gaining the top of the ridge, it descends very rapidly towards Upper Alton, which leads to the necessity of adopting a plane of 5,900 feet in length, with a declivity of 52.80 per mile. From this to the point of termination, nothing of consequence occurs, except the crossing of some lots of the town plat previous to entering Liberty street.

Having thus completed the preliminary survey between Upper Alton and the east branch of Cahokia creek, a point common to both the northern and southern routes, I next proceeded, in compliance with instructions of the Commissioner of the second judicial circuit, to definitely locate thirteen miles for contract from the city of Alton.

From my investigations between Upper Alton and Hillsborough, I discovered that the prominent consideration which led the chief engineer of the western district to the adoption of the line recommended by him, would be entirely removed by the adoption of the northern route; and having satisfied myself that the northern route was urged by every consideration, I thought it advisable to procure, if possible, a more economical location between the city of Alton and Upper Alton than the one recommended by the chief engineer of the western district.

I accordingly commenced a survey near the crossing of the Mount Carmel railroad over Shields' branch, in the city of Alton, and curving with a radius of 10.50 feet, until the proper direction was obtained to pass up a ravine marked on the topographical map (2A.) situated southeast of the common road leading from the city of Alton to Upper Alton; thence following the ravine to its head; thence passing with a cycloid on a radius of 1,900 feet diagonally over the block of the town plat of Upper Alton, between Garden and Bloomfield streets; thence entering Main street at the junction with Bloomfield street; thence passing through Main to Edwards street; thence diagonally across the block between Edwards and Mechanic streets; thence entering Liberty street at the corner of Mechanic street, where it intersects the northern route, heretofore described. The length of this line is 1.45 miles; the maximum grade is 105 feet per mile; the cost of graduation $7,871 60. Although the maximum grade of this is very steep, yet, as it is suggested to use horse-power between the two towns, the objection to so steep a grade is measurably removed. The expense of applying horse-power to this part of the line will be greatly lessened by the erection of the depot at the junction of this road with the Mount Carmel road. It is now a well

established practice to place depots on the exterior of towns, and make use of horse-power for the transportation between the depot and the business part of the town. The generally admitted correctness of this practice renders any argument in its favor superfluous. If, then, this practice should obtain in this State, the location of the depot at the junction of this road with the Mount Carmel road at Shields' branch would be not only judicious, but almost imperative. The same horses, then, required for the business part of the city of Alton, could be used for the same purpose between the Lower and Upper towns.

Another consideration, which urges itself with great force in favor of the adoption of this line between the two towns of Alton, is its trifling cost. The estimated cost of the line recommended by the chief engineer of the western district, with the view of crossing Wood river, is $48,719. The difference in favor of the line surveyed by myself furnishes a strong argument not only in favor of this line, but of the adoption of the northern route beyond Upper Alton.

These considerations induced me to adopt, for definite location, the line above described, as the best possible route between the city of Alton and Upper Alton. To secure to the citizens of Upper Alton the full benefits of a location through that town—to avoid the heavy expense of crossing Wood river and the steep grade on either side of it—to establish a grade through the whole distance to Hillsboro, which would enable a given power to overcome the intervening obstacles with the greatest despatch and trail the greatest amount of tonnage—to secure to the inhabitants along the line of the road the greatest advantages of locations, and to the whole State the benefits of the most economical construction—I was led to adopt the northern route after leaving Upper Alton.

The maximum grade on the northern route is 52.80 feet per mile. The plane, with this grade, is, in the immediate neighborhood of Upper Alton, descending towards the town, and is 5,900 feet in length. Its descent towards the town—the direction in which the greatest portion of the tonnage would be transported—renders it much less objectionable than it would be elsewhere. At the summit, a double track of 500 feet is provided for, so as to enable an engine to return to the depot at Upper Alton for any additional number of cars it would be enabled to trail over the balance of the road.

The maximum grade of the southern route is 56¼ feet per mile; and there are 6¼ miles of grade ranging from 52 to 56¼ feet per mile. On the northern route there is no plane, excepting the one above mentioned in the neighborhood of Upper Alton, exceeding 39.60 feet per mile. The planes on the northern route are short and undulating, while those on the southern route are generally long. The consequence is, that an engine of a given power will trail with more speed a greater amount of tonnage on the northern than on the southern route.

The length of the northern route to the point of intersection of the two routes is 35.63 miles, and of the southern route, 31.38 miles. Although the advantage of distance is in favor of the southern route, yet the advantage in grade of the northern route will more than counterbalance it; for a given power, with the same load, will pass, in less time, over the northern than the southern route. For a more critical comparison

of the capacity of the two routes, I would refer you to the tables herewith submitted, marked A, B, and C.

The aggregate cost of the southern route will be (see table of estimates) $328,772; of the northern route, $299,436—showing an advantage in favor of the latter, of $29,336.

Having, for the above reasons, adopted the northern route from Upper Alton, for the continuation of the location of the 13 miles to be put under contract, I have made the necessary maps, profiles, and estimates, which are herewith submitted, together with those of the route from the city of Alton to Upper Alton.

Having thus completed the location of the 13 miles to be put under contract the 22d inst., I proceeded, conformably to your instructions, to the extension of the preliminary survey towards Shelbyville. The surveys are now progressing in the neighborhood of Hillsboro, and from the examinations already made, it is ascertained that the obstacles in the vicinity of that town are not as formidable as were anticipated. Should the season not prove too inclement, I shall be able to complete the survey by the 15th of November.

In conclusion, I but perform, to those composing my corps, a pleasing duty, in stating that in all my operations I have been very greatly aided by them, collectively and individually. Messrs. Edward Shotwell and A. W. Cutter, junior, assistants, have sustained themselves in a manner equally honorable to the service and satisfactory to me; and to Samuel Brooke, jr., especially, am I indebted for the ability and skill with which he discharged all the important duties assigned him during my temporary absence.

With high respect, your obedient servant,

F. HAWN,

Senior Assistant Engineer.

A.

Table of Gradients of the Southern Route.

This table (as well as that of the Northern route) is not continued to the termination of the route, but ends, after passing over the rough ground, at a point where the surface and grades will be equal on both routes.

No. of plane.	Length of each plane.	Direction.	Inclination per mile.	Total elevation and depression, in feet.	Above the Mt. Carmel railroad.	Localities.
	Feet.		*Feet.*	*Feet.*	*Feet.*	
1	400	descent	13.20	1.00	106.50	In Upper Alton.
2	8,500	"	52.80	86.00	21.50	Descending into the valley of Wood river.
3	700	level	–	–	21.50	In the valley of Wood river.
4	4,300	ascent	55.22	45.00	66.50	Ascending out of the valley of Wood river.
5	3,300	"	26.18	61.33	82.83	On dividing ridge.
6	5,600	"	16.63	78.93	100.47	On dividing ridge.
7	5,200	"	39.60	117.93	139.47	On dividing ridge.
8	1,600	descent	13.19	89.97	135.50	On dividing ridge.
9	2,400	ascent	22.96	129.37	124.06	On dividing ridge.
10	1,400	level	–	–	124.06	On dividing ridge.
11	1,400	ascent	30.09	137.35	132.04	On dividing ridge.
12	400	"	30.09	140.15	134.32	On dividing ridge.
13	2,100	descent	12.67	95.00	129.28	Descending into the valley of East branch.
14	6,900	"	56.49	168.84	55.45	Descending into the valley of East branch.
15	2,700	level	–	–	55.45	In the valley of East branch.
16	7,400	ascent	54.91	217.11	132.41	Ascending out of the valley of East branch.
17	2,400	"	26.40	229.12	144.41	Ascending out of the valley of East branch.
18	1,400	level	–	–	144.41	Ascending out of the valley of East branch.
19	2,400	ascent	34.32	244.71	160.01	In Dorsey's prairie.
20	3,700	"	31.68	246.93	162.23	
21	8,000	level	–	–	162.23	
22	4,000	descent	9.50	176.04	155.03	
23	4,400	ascent	48.04	286.97	195.07	

B.

Table of Gradients of the Northern Route and Line of Location.

In instituting a comparison between the Northern and Southern routes, commence at Plane No. 1. Planes A, B, &c. belong to the line between the Mt. Carmel railroad and Upper Alton.

No. of plane.	Length of each.	Direction.	Inclination per mile.	Elevation or depression.	Total elevation above the Mt. Carmel railroad.	Localities.
	Feet.		*Feet.*	*Feet.*	*Feet.*	
A	200	level	–	–	–	In the valley of the Mississippi.
B	5,800	ascent	105.60	116.00	116.00	Ascending the Mississippi bluff.
C	400	level	–	–	116.00	In Upper Alton.
D	900	descent	52.80	9.00	107.00	In Upper Alton.
1	2,200	ascent	29.56	128.32	119.32	In Upper Alton, Liberty street.
2	900	level	–	–	119.32	In Upper Alton precincts.
3	800	descent	31.68	4.80	114.52	In Upper Alton precincts.
4	100	level	–	–	114.52	In Upper Alton precincts.
5	1,700	ascent	29.56	137.40	124.04	In Upper Alton precincts.
6	100	"	50.68	138.80	125.00	Between N. Buckmaster's and summit of ridge.
7	5,900	"	52.80	197.80	184.00	Between N. Buckmaster's and summit of ridge.
8	100	"	46.72	198.68	184.88	Between N. Buckmaster's and summit of ridge.
9	1,100	level	–	–	184.88	Between N. Buckmaster's and summit of ridge.
10	3,600	descent	40.12	41.16	157.52	Crossing Coal Branch valley.
11	100	"	8.07	41.31	157.47	Crossing Coal Branch valley.
12	100	level	–	–	157.47	Crossing Coal Branch valley.
13	2,400	ascent	31.68	213.08	171.87	Ascending Coal Branch valley on the east side.
14	1,800	"	36.96	225.68	184.47	
15	400	level	–	–	184.47	
16	1,300	descent	34.84	49.89	175.89	
17	1,000	ascent	15.84	228.68	178.89	
18	800	level	–	–	178.89	Opposite female seminary.
19	1,400	descent	25.08	56.54	172.24	
20	1,500	level	–	–	172.24	
21	100	ascent	26.40	233.68	177.24	
22	1,300	level	–	–	177.24	
23	2,500	ascent	36.96	251.18	194.74	Scarritt's prairie.
24	2,500	"	21.12	261.18	204.74	
25	1,700	level	–	–	204.74	
26	400	ascent	26.40	263.18	206.74	
27	2,700	level	–	–	206.74	
28	4,400	ascent	15.84	276.38	219.94	
29	2,800	"	36.96	295.98	239.54	
30	4,500	level	–	–	239.54	
31	1,800	ascent	26.40	304.98	248.54	
32	600	level	–	–	248.54	
33	3,200	descent	39.60	81.04	224.04	
34	100	"	26.40	81.54	223.54	
35	1,300	level	–	–	223.54	
36	500	ascent	26.40	307.48	226.04	
37	1,400	level	–	–	226.04	
38	1,200	descent	26.40	87.54	219.94	

C.

The following table, exhibiting statements of the capacity of locomotive engines to overcome or ascend different grades, with their loads attached, are adduced from actual experiment made upon the different railroads in the United States.

STATEMENT No. 1 exhibits the weight of train a locomotive engine is capable of moving (exclusive of engine and tender) at a rate of speed of five miles per hour, as its ordinary performance, or a maximum of useful effect, upon a railroad in ordinary repair, upon the different acclivities, set in the opposite column, under head of ascent per mile.

By reducing the weight of train, its speed will be accelerated; and an engine that will overcome an ascent of twenty-five feet per mile, with a train weighing 60.24 tons, at a rate of speed of five miles per hour, will, under the same circumstance, attain a speed of ten miles per hour, with a train weighing 37.36 tons.

STATEMENT No. 2 exhibits also the weight of train (exclusive of engine and tender) as the extraordinary, or greatest effect upon the same grades, and at the same rate of speed, under most favorable circumstances, where the cars, road, and machinery, are in perfect adjustment, and the engine supplied with the best fuel, &c.

STATEMENT No. 3 exhibits the weight of load a horse can draw at a speed of two and a half miles per hour, and for eight hours per day, upon the several grades opposite in the column of grades.

By applying this table to ascertain the capacity of a road, it should be remembered that, although the calculations are not made with reference to grades of a particular length, a locomotive can, for a short period, double its usual performance; and if the planes are short and alternate, with levels or descents, a much greater useful effect can be produced on them. For example: a locomotive can ascend an aclivity of ten feet per mile, trailing a train weighing 89.65 tons; whereas, if it traverses a level with that load, it can meet with and ascend, for a short distance, an acclivity of twenty feet per mile; but if the grade is of great length, it can ascend it with only 67.86 tons.

Ascent per mile.	No. 1. Maximum of useful effect.	No. 2. Extraordinary or greatest effect.	No. 3.
Feet.	*Tons.*	*Tons.*	*Tons.*
Level	128.88	266.16	16.00
5	106.00	220.40	14.07
10	89.65	184.24	12.05
15	77.40	163.20	10.55
20	67.86	144.13	9 37
25	60.24	128.88	8.44
30	54.00	116.40	7.67
35	48.80	106.00	7.03
40	44.40	97.20	6.49
45	40.62	89.65	6.02
50	37.36	83.12	5.63
55	34.50	77.40	5.27
60	31.97	72.35	4.96
65	29.73	67.86	4.68
70	27.72	63.85	4.44
75	25.92	60.24	4.22
80	24.28	56.97	4.11
85	22.80	54.00	3.83
90	21.44	51.28	3.67
95	20.20	48.80	3.51
100	19.05	46.51	3.37
105	18.00	44.40	3.25

Report of Walter Terrell, Engineer Southern Cross Railroad.

INTERNAL IMPROVEMENT OFFICE,
Belleville, October 23, 1838.

TO EDWARD SMITH, Esq.,
Principal Engineer of the Southern Engineering District of Illinois.

SIR: In compliance with your letter of instructions, received on the 17th of September, ordering an examination, survey, and definite location of two miles of the Southern Cross railroad, at Carlyle, embracing the crossing of the Kaskaskia river, I herewith present you a brief report of estimates, grades, and curvatures thereof.

Field operations were commenced on the 19th day of September and vigorously prosecuted till the 30th, notwithstanding the frequent attacks of sickness on several members of the party.

A compass and level line was first run from the Kaskaskia river, eastwardly, along the great western mail route to the Grand prairie, a distance of three miles, by which the general elevation of the country could be correctly determined. Finding thereby that there were two ridges, to wit, Bond's and Huey's, each of which is eighty-two feet above the general level of the river bottom land, and unfortunately at right angles to the direction of the survey—a strict reconnoissance was then made to pass around or through them in depressions.

Notwithstanding two miles only were directed to be definitely located, yet it was found absolutely necessary for the examinations to extend each way much further, in order thereby to ascertain the obstacles which would be in the continuation of any one of these routes.

A location was then commenced on the west edge of Grand prairie, passing the lowest possible ground on the ridge, about a half mile north of Col. Huey's house; in which ridge was an average cut of twenty-three feet for about twelve hundred feet, with a grade of sixty-two and a half feet per mile for 2800 feet; thence passing Spring creek, though dry, yet having the appearance of discharging a great quantity of water during freshets. This valley, about four hundred feet wide, must be passed with an embankment of thirty-four feet high, and consequently, a very costly culvert, not less than six feet chord and one hundred feet long—suitable stone being about five and a half miles distant and on the opposite side of the river.

The line then passes over a post-oak flat, and nearly horizontal, for a half mile; then descending into the low land of the Kaskaskia bottom, with a grade of fifty-five and a half feet per mile, for nearly a half mile, crossing a creek requiring a small tressle bridge and several small drains; thence around the north end of Bond's ridge, with grades nearly horizontal, and curves not exceeding four degrees. This is mostly side-hill cutting, and very precipitous, the base of the hill having been once washed by the river, and is yet overflown to the depth of eight or ten feet at high water, as indicated by drift-wood and ice marks. After leaving this bluff, which is indented with frequent and deep ravines, the line passes a fourth of a mile north of Mrs. Bond's house, and with a five degree curve enters the Kaskaskia bottom, and obtains the north edge of the great western mail route embankment; contiguous and parallel to which it crosses the Kaskaskia river, in the pool of the Carlyle mill-dam; thence

with a sinuous line, deflecting according to the nature of the country, it passes through the lower town of Carlyle; and about one mile west of which, in a direction to the Shoal creek crossing, it terminates.

The next route which invited particular attention and critical examination, was one in which Huey's ridge could be avoided—a deflection from the aforesaid line (marked A,) near the northeast edge of Bond's bluff, bearing south 57½° east, in the direction to cross a depression in Huey's ridge, about half a mile south of the great western mail route, where the experimental survey of July, 1837, crossed it. This line was found to be practicable, having moderate grades and gentle curves; yet, from its passing obliquely through several farms, and making three-fourths of a mile southing, after having made a fourth of a mile northing, rendering it materially objectionable.

An examination of a route crossing the Kaskaskia a quarter of a mile north of the mail route, and deflecting from the north route [marked A] on the east side of the river, crossing the bottom on about the same elevation as the former line; thence, with a tangent, through Judge Breese's addition to Carlyle. This line, like all others, has its advantages and disadvantages. For practicability and cheapness, it equals the route in which the railroad and the mail route cross together, except in the one particular of the bridge, which would be for railroad purposes only—and the embankment being single, and not having the support of being connected with the mail route embankment. This, together with the route marked A, consists principally of clay graduation and heavy timbered grubbing and clearing.

The southern route, marked B on the map and profile, is next considered. This line occupies nearly the same ground whereon was run the experimental line of July, 1837. It commences in the east edge of section 20, township 2 north of range 2 west of the third principal meridian, and thence west over the south end of Bond's bluff, where there is an average cut of twenty-five feet for seven hundred feet, a five degree curve, with a grade of fifty-eight feet per mile for three thousand six hundred feet, descending to the bottom land of the Kaskaskia. From the elevation of this hill, and the depth to which it will be cut, rock may be apprehended. Before the operations for graduation shall have commenced, it may be advisable to sink a test-pit at the greatest depth of cutting, which is thirty-two feet, and if rock should be found, the grade may be conveniently raised, and thereby render it less expensive. This, as the north line, crosses the bottom on the north side, and at the foot of the mail route embankment, and occupies the same ground through the town of Carlyle to its termination. Worthy of consideration, and in connection with this route, may be mentioned the alley route. This line, upon examination, may be found to interfere least with the private property of the town; yet there is a grade of sixty-three and a half feet per mile for nine hundred feet, directly west of the Kaskaskia river crossing.

It appears necessary that a choice should now be made between the north and south routes. It will appear from the maps, that they connect on the river bottom, and thence to the western termination, occupying the same ground. From an investigation of the costs for the two miles only, including the bridging, it will be seen that the south exceeds

the north route by $4,428, which would be but a small argument in favor of the north; and when it is known that the two miles on the south route embrace all the heavy and expensive graduation, with grades and curvatures but little if any exceeding the north route; and a continuation of this line, either at the east or the west end, would require but little graduation and no grubbing or clearing; (while that of the north would require expensive graduation and heavy clearing and grubbing)—it is reasonable to conclude that a preferance should be given to the south route.

The whole work has been divided into three sections—the graduation grubbing, clearing and draining for the two miles, comprise two sections, being one mile each—and so arranged that they may be prosecuted without interfering the one with the other. The bridging and masonry, together with the pits and foundations, comprise the third section.

The same amount of tressle bridging, on the river bottom, has been adopted for the railroad as had been contemplated on the western mail route, and instituted in similar situations, except that stone abutments be used instead of wood.

The estimates for the main bridge across the Kaskaskia have been made upon Burr's plan, with double track roadway and roofed—three ribs and three double arches of 1 0 feet span; to which are added two land spans, of 30 feet each, of double track, supported on stone piers.

The stone for the abutments, &c., can be obtained about two and a half miles south of Carlyle, near the river bank The quarries have not been opened to that extent which would warrant a certainty of obtaining first rate rock; but from the natural appearances, a conclusion may be safely drawn that suitable stone for range rock or range ruble masonry can be had.

For a full and more satifactory explanation of this survey, in addition to this report, I beg leave to refer you to the maps, profiles, and estimates, on which are shown the sub-divisions of the work into sections. All of which is respectfully submitted.

WALTER TERRELL.

An estimate of the probable cost of that part of the Southern Cross Railroad as lies in and near Carlyle, and on each side of the Kaskaskia river, and embracing a distance of two miles.

Section No. 1, commencing in the east part of section 20, township 2 north, and range 2 west of the principal meridian, and extending northwestwardly over the Kaskaskia river bluff and nearly to its foot, a distance of 5,300 feet.

4,626 cubic yards of embankment, at 18 cents - -	$832 68
43,026 cubic yards of excavation, at 20 cents - -	8,605 20
33 chains of clearing, at $4 - - -	132 00
28 chains of grubbing, at $4 - - -	112 00
1 open drain of 3 feet span, 6 perches, at $4	24 00
	$9,705 88

Section No. 2, extending across the Kaskaskia river bottom adjoining and parallel to the Great Western mail route, and to the west end of Carlyle proper—5,300 feet.

12,657 cubic yards embankment, at 20 cents - -	$2,521 40
14,526 cubic yards excavation, at 20 cents - -	2,905 20
13 chains clearing, at $4 - - - -	52 00
5 chains grubbing, at $4 - - - -	20 00
3 stone drains, 92 perches, at $4 - - -	368 00
	$5,866 60

Section No 3 comprises the main bridge of 150 feet over the Kaskaskia, and connected within two spans of 30 feet each; the masonry, foundation pits, foundation timbers, if necessary, 600 feet lineal of tressle work bridging at two different places on the river bottom, and the masonry of abutments, if adopted.

Burr's Plan.

Superstructure.

150 feet lineal of main bridge, at $40 - -	$6,000 00
60 feet lineal land spans, at $15 - - -	900 00

Masonry of range rock work.

1,150 perches, at $6 - - - - -	6,900 00
260 perches on small piers, at $5 - - -	1,300 00
260 ¾ in. bolts - - - - -	104 00
Pits and foundation timbers - - - -	400 00

Single track tressle work on river bottom.

600 feet lineal, at $4 - - - - -	2,400 00
4 stone abutments, 130 perch, at $5 - - -	650 00
	$18,654 00

No. of Sections.	Tangents.	Curves.			
		2	3	4	5
1	4.100	–	–	–	1,200
2	2.100	–	–	2,600	600

EXHIBIT No. III.

REPORT OF ELIJAH WILLARD,

WITH ACCOMPANYING DOCUMENTS.

INTERNAL IMPROVEMENT OFFICE,
Vandalia, December 10, 1838.

To the PRESIDENT *of the Board of Public Works.*

Since the meeting of the Board of Public Works, in June last, 3 miles and 2.16 chains of one hundred feet of the Central railroad, at the northern crossing of Cash river, have been put under contract.

Contract No. 3—in length four chains of one hundred feet, including the building of a bridge at the southern crossing of Cash river, has been relet in consequence of the persons to whom the work was awarded at the letting in Jonesboro, on the 7th day of May last, failing to enter into contract.

These two contracts were awarded to Bryan Shannissee. of Madison county, Ill., at the letting in Jonesboro, on the 23d day of August last, and are contracted to be finished and delivered up to the State on or before the first day of December, 1839.

Much has already been done; and from the known responsibility and efficiency of the contractor, there is no doubt of his having the work completed within the time specified.

Contract 7—in length, 3 miles 3.6 chains of one hundred feet, was awarded to Graham and Ryan; and contracts 1, 2, 4, 5, and 6, in length about 17 miles, to M'Ginley and Graham, at the letting in Jonesboro, on the 7th day of May last, who are bound to have the same completed, and ready to deliver up to the State, on or before November 1, 1839.

The work on these contracts is in a favorable state of forwardness, exhibiting such industry, efficiency, and perseverance on the part of the contractors as to ensure the completion of the same within the time required of them. The work on all of these contracts embraces about twenty-three miles of the Central railroad, extending from the bank of of the Ohio river, in Cairo city, northward.

Henry Singleton, of St Louis, has contracted to deliver, on or before the first day of March, 1840, the timber for the superstructure of all of these portions of the railroad, at about $1,623 per mile. The contract was awarded to him at the letting at Cairo city, on the 7th day of November last. From the known character of Mr Singleton, it is believed that this work could not be in better hands for the interests of the State.

Ten acres of land has been purchased for the depot ground in Cairo,

at the southern termination of the road, in the most favorable situation, and with all the advantages of an excellent landing on the Ohio river; for which was paid five hundred dollars.

An order of the Circuit Court was obtained last spring, at Unity, in Alexander county, for the right of way of the Central railroad through sections 25, 26, 23, 14, 11, 3, and 2, in township No. 17, south range No. 1 west of the 3d principal meridian, and for the privilege of materials for the construction of the road, without an award of damages to the proprietors of the land.

The right of way has been relinquished, voluntarily, through thirteen tracts of land in Union and Alexander counties. No case for the right of way has come to the decision of a jury in either of these counties, and it is presumed that none will.

About one thousand acres of land, in Alexander county, has been purchased for the State, at Government price; about one-half of which was entered within the last six months, all of which is well situated and of much value to the State. A house for a railroad office and lot in Jonesboro has been purchased, for which three thousand dollars was paid. This building and lot are at a very convenient point for the business of the third judicial circuit, and more particularly for the southern portion of the Central railroad.

Two engineering parties were organized and commenced operations on the Central railroad, near its southern termination, about the first of February last—one party running experimental lines, and the other locating. Both parties continued in the field until about the first of May, when one was disbanded, and the other continued in the field until they completed a line from Cairo to Vandalia, which was accomplished about the first of June, when they returned to Alexander county and continued operations in the field until about the first of November; when the party was disbanded, and only a sufficient number of engineers and assistants retained to superintend the works in progress of construction.

That part of the Alton and Shawneetown railroad between Shawneetown and Equality, is divided into ten sections of about one mile each.

The delivery of the timber for the superstructure of the bridge at the crossing of the north fork of the Saline, and for the superstructure of this part of the road—about twelve miles in length—was put under contract at the letting in Shawneetown on the 10th day of September last; which is contracted to be delivered on the line of the railroad on or before the 31st day of December, 1839.

Orvell Secton, of Gallatin county, Ill., has the contract for furnishing timber for the superstructure on section 1; E. A. and A. A. Gibbon, of the same county, for sections 2, 3, 4, 5, 6, 7, and 8; John Crenshaw, for section 9, and the timber for the bridge; and Benjamin White, for section 10; John Crenshaw and Edgar Bogardus, for the building of the offices and depot buildings at Shawneetown, and for building the depot building at Equality, which they have agreed to have completed within eighteen months from the 12th of September last. All of these men are considered efficient contractors.

Alfred Richerson, who contracted for sections 1, 2, 3, 4 6, 7, 8, 9 and 10, comprising about eleven miles of this road, at the letting in Shawneetown, on the 15th of March last, has his work in a state of advancement

highly creditable to himself as a contractor. This work is contracted to be completed on or before the 25th of November, 1839.

Section No 5, about one mile in length, taken by James Ryan, at the same time and place, and to be finished at the same period, is in a favorable state of forwardness.

In obtaining the right of way, no difficulty of importance has arisen on the work. Three cases only have gone to a jury; one of which is about to be settled with but little expense to the State. The other two are yet undetermined.

The general disposition of the citizans owning land along the line of the road has been to relinquish voluntarily. The citizens of Shawneetown and Equality have been as liberal as could be desired in their donations of land to the State on which to erect depots, buildings, offices, machine shops, &c. Those of the former place have released to the State about four acres, in lots, very favorably situated for the purposes of the road; and those of the latter, a sufficient quantity for all present and future purposes.

A tract of land of about 800 acres, entered in Gallatin county, at government price, for the State, has become quite valuable, and would readily sell at a very considerable advance on the cost. The entry on the line of the road at Muddy river is valuable.

An engineering party was organized on this road last spring; their operations extended from equality to the intersection with the Alton and Mount Carmel railroad, locating, in the mean time, about thirty miles north of Equality, and three miles at Silver creek, ready for contract. The party was discharged from the field about the first of October last.

The total amount of money received by me	–	–	$91,371 46¼
Amount expended on Little Wabash river since the 4th June last	$2,724 65¼		
Am't expended on same river previous to 4th June last	211 76		
		$2,936 41¼	
Total amount expended on Alton and Mount Carmel railroad previous to 4th June last, (principally for Government land)	–	1,975 29	
Expended on account of general fund previous to 4th June last	1,715 00		
Expended on acc't of general fund since 4th June last	1,485 00		
	3,200 00		
Of this general fund there has been charged to Central railroad	2,350 00		
Amount expended previous to 4th June last, on Central railroad	14,768 22½		
Am't expended since 4th June last on Central railroad	22,525 37¾		
		39,643 60¼	
Of the general fund there has been charged to Alton and Shawneetown railroad	850 00		
Amount expended previous to 4th June last on Alton and Shawneetown railroad	13,152 33½		
Amount expended since 4th June last on Alton and Shawneetown railroad	28,761 41½		
		42,763 75	
Total amount expended by me	–	–	87,319 05¾
Amount due the State on the 3d December, 1838	–	–	4,052 40¼

All the money expended in the purchase of land is charged to the railroad to which they are adjacent.

No lettings have taken place on the Little Wabash river, in consequence of the inadequacy of the appropriation to commence and complete the most important improvements in a manner contemplated by law. A survey of the river has been made—the result will be found in the report of the principal Engineer, Mr. Smith, a copy of which is hereto annexed and made a part of this report. That portion of the timber obstructions, estimated at $3,658, will soon be removed. This work is carried on by Captain Joseph Jones, of Mount Carmel, who was employed under the direction of the principal engineer.

The report of the principal engineer in charge of the Central railroad, and Shawneetown and Alton railroad within the 3d judicial circuit is in process of preparation, and will in a short time be submitted, to which I shall request a reference for details.

I have the honor to be,
Your obedient servant,
ELIJAH WILLARD, *Commissioner.*

INTERNAL IMPROVEMENT OFFICE,
Mount Carmel, November 10, 1838.

To ELIJAH WILLARD, Esq.
Commissioner of Public Works of the State of Illinois for the third Judicial Circuit.

SIR: The surveys and examinations of the Little Wabash river having been closed for the season, I have the honor to submit to you, herewith, the drawings, estimates, and field books in relation thereto.

As was stated to you in a former communication, the continuous high stage of water in the river delayed, until near midsummer, the proper examinations requisite to be made of the bed of the stream, to determine on the most judicious plans for improvement. A preliminary survey of the river about the obstructions at Carmi and New-Haven, was made early in the spring, with the expectation that the soundings could be taken and the bed of the river examined shortly thereafter; this expectation was disappointed by the cause above alluded to.

As soon, however, as it was at all practicable to determine the nature of the obstructions at the two points above named, with a view of fixing on a plan of operations, Mr. Seymour, assistant engineer, was detailed to that service.

The result of this survey and examination, with the plans proposed by the engineer for the improvements at New-Haven, together with his estimate of the probable cost of executing them, were submitted to you in the month of August last. The leading object in view in projecting the plans above alluded to, was to endeavor to bring the costs of construction within the limits of the appropriation, and thus secure the immediate prosecution of the work. It was understood at the same time, that the proprietors of the hydraulic privileges at New-Haven valued their vested rights, which it was necessary for the State to obtain before erecting the works, at a sum which, if paid, would reduce the appropriation to a rather limited amount.

The law, also, imperatively requires that the improvements on the river should be adapted to *steamboat* navigation. It consequently became necessary to submit plans of rather a temporary and perishable character, and by no means such as a judicious economy, the best interests of the community, or the importance of the improvement would seem to demand. The plan of a wooden lock, submitted by Mr. Seymour, was regarded as rather an unavoidable expedient under the circumstances of the case, than entitled to your adoption; and it was even found that the residue of the appropriation, after paying the demand for damages, would be insufficient to complete the work, even on that undesirable plan.

These facts having been submitted to you, and the letting being suspended until the interview which we had at the railroad lettings at Shawneetown, on the 10th of September last; and it then having been concluded not to involve the State in contracts and liabilities beyond the means of the appropriation to liquidate, it was thought most advisable to defer the lettings of the work until the meeting of the Legislature. With the hope and expectation that additional appropriations would be obtained

to ensure the construction of the work on a more permanent and substantial plan, I instituted further and more minute examinations of the bed of the river during the low stage of water; and herewith submit the result.

The unusual depression of water in the river was very favorable for these examinations, and they developed the fact that the fall at the New-Haven and Carmi ripples to be overcome by the proposed works was greater than the approximate calculations, made during the higher stages of water, had indicated.

In order to overcome the rapids at New-Haven, and extend slack-water navigation to the town of Carmi, it will require a lock of at least eighteen feet lift. It is proposed to construct this lock within the bed of the stream, as shown by the drawings, and to be submerged at a stage of water that will give at least four feet depth of water over the comb of the dam.

A plan, profile, and estimates of the probable cost of a dam, and a steamboat lock one hundred and thirty-three feet by thirty-five feet within the chamber, and calculated to effect the above object, accompany this report.

The dam is to be built of substantial crib-work, filled with stone, and planked; and the lock of the best sandstone rock found in the vicinity of the work, and to be laid in ranged hammer-dressed masonry, with hydraulic lime, and lined with plank.

It is proposed to use lime stone for the breast rock, hollow quoins, and capstan wells, which can be procured from the Ohio river.

A lock of this description would combine economy with durability, and answer the purpose of a cut stone lock of much more expensive construction. The dam would be of sufficient height to produce a valuable amount of water-power, ensuring profit to the State, and incalculable benefit to a fertile and interesting portion of country immediately contiguous to the work.

The plan above suggested is not recommended as the best that could be adopted. If a sufficient appropriation could be obtained to construct a canal and locks around the falls both at Carmi and New-Haven, it would certainly be highly preferable to placing the works within the bed of the stream. The dams at both points, and especially at Carmi, could have much additional elevation, and the effective amount of the water-power vastly increased without prejudice to the country above them; and it admits of easy calculation to show that the interest on the additional costs of the work would bear but an inconsiderable proportion to the increased value of the water-power thereby created.

The result of the examinations and estimates of Captain Joseph Jones, the superintendent on the river, in regard to the timber obstructions to the navigation, have been submitted. Agreeably to your instructions, the superintendent is progressing with the removal of the timber obstuctions with as strong a force as he has been able to employ; and as the health of the valley improves, he expects to be able to obtain a sufficient number of first rate hands to ensure its very efficient progress, if not its completion the present fall and winter: All which is respectfully submitted.

EDW. SMITH,

Principal Engineer, &c.

An estimate of the probable costs of constructing a dam and steamboat lock on the Little Wabash river, at New-Haven, accompanying the engineer's report, dated November 10, 1838.

1,583 cubic yards of excavation in lockpit, at $2	$3,176 00
4,070 cubic yards of excavation in channel below lock, at $1 50	6,105 00
2,000 cubic yards of earth excavation above water, at 20 cents	400 00
9,222 feet of lumber in lock foundation, at 15 cents	1,383 30
8,400 feet of plank (3 inches), at 6 cents	504 00
8,400 feet of plank (2 inches,) at 4½ cents	378 00
6,300 feet of lining plank, at 5 cents	315 00
1,680 feet of string timber in wall, at 15 cents	252 00
Lock-gates, water-sills, and apparatus	1,600 00
9,000 lbs of wrought iron, at 15 cents	1,350 00
5,000 lbs of cast iron, at 8 cents	400 00
2,853 perches of ranged hammer-dressed masonry laid in hydraulic cement, at $9	25,677 00
Limestone hollow quoins, breast and well-rock	1,300 00
250 feet of crib protection above and below lock, at $10	2,500 00
	$45,340 00
290 feet of dam, (crib-work filled with rock and planked with 5 inch plank,) at $26 per foot running	7,540 00
360 perches of ranged ruble masonry in abutments, at $6	2,160 00
960 yards of slope protection wall, at $1 50	1,440 00
2 culverts for hydraulic purposes	2,500 00
Side-cut for use of water-power	2,500 00
	$61,480 30
Add for superintendent and contingencies	3,074 00
Total amount	$64,554 31

Note. The same description of improvement will be required at Carmi; and the above estimate may be considered applicable in amount, or nearly so, to the works at that point also.

An estimate of the probable cost of improving the channel of the Little Wabash river by removing the timber obstructions therein, and forming cut-offs to the long and abrupt bends, which each estimate is predicated on the survey and examinations of the said river from Louisville, in Clay county, to its mouth, by Capt. Joseph Jones, superintendent, under the direction of E. Smith, principal engineer, &c.

Note. The work is classified into two classes; the one embracing the clearing of the channel by removing drift, snags, and sunken logs, and by clearing the banks of falling in timber, designated as indispensable work, and the other class, embracing the cut offs, designated dispensable works, viz.

	Dispensable works.	Indispensable works.	
Section No. 1, (distance 40 miles,) extending from Louisville, on section 18, township 3 north, range 7 east, to M'Cauley's bridge, on section 21, township 3 north, range 8 east, in Clay county.			
Estimate for clearing leaning trees - - -	-	$628 00	
" " drift - - -	-	102 00	
			$730 00
1st cut-off - - - - - -	$1,405 18		
2d cut-off - - - - - -	156 00		
Section No. 2, (distance about 45 miles,) extending from M'Cauley's bridge, on section 21, township 3 north, range 8 east, to Mitchell's farm, on section 20, township 1 north, range 10 east, in Wayne, Clay, and Edwards counties.			
Estimate for clearing - - - - -	-	1,106 00	
" " drifts - - - -	-	120 00	
			1,226 00
Cut-off nearly washed through above Shelby's mill, estimated - - - - - -	-	30 00	
Section No. 3, (distance about 42 miles,) extending from Mitchell's, on section 20, township 1 north, range 10 east, to Leach's mill, on section 20, township 2 south, range 9 east.			
Estimate for clearing - - - - -	-	666 00	
" " drift - - - -	-	26 00	
1st cut-off (½ mile around, 50 feet across, 10 feet high, 50 feet wide at the bottom and 60 feet at the top,) making 925 cubic yards excavation, at 15 cents -	138 90		
2d cut-off nearly formed; boats pass through in high water.			
3d cut-off, (the bend in which Elm river empties, 5 miles round, 1,925 feet across, 10 feet high, 40 and 60 feet wide, slough running across on surface; general course northeast and southwest,) making 35,648 cubic yards excavation, at 15 cents -	5,347 20		
4¼ acres clearing, at $10 - - - -	42 50		

ESTIMATE—Continued.

	Dispensable works.	Indispensable works.	
Section No. 4, (distance of about 62 miles,) from Leach's mill, on section 21, township 2 south, range 9 east, to Carmi, on section 13, township 5 south, range 9 east, in Wayne and White counties.			
Estimate for clearing - - - - -	-	-	$652 00
Drift, none.			
Cut-off—course northeast—nearly formed, about a mile round, and 180 feet across.			
Section No. 5, (distance about 48 miles,) extending from Carmi, on section 13, township 5 south, range 9 east, to mouth of river, on section 24, township 7 south, range 10 east, in White and Gallatin counties.			
Estimate for clearing - - - - - -	-	-	358 00
Drift, none.			
Cut-off—western bank worn to a hollow, and comes up sloping on the eastern bank to the height of 10 feet, 110 feet across; course northwest and southeast.			
Total amount of clearing - - - -	-		$3,658 00

CENTRAL RAILROAD OFFICE,
Vandalia, December 24, 1838.

To the Hon. WM. KINNEY and ELIJAH WILLARD,
Commissioners of the Board of Public Works.

GENTLEMEN: I have the honor to submit a report of the past operations and present state of the Central railroad from Vandalia to the city of Cario.

The first surveys of this line were commenced at Cairo in August, 1837, and steadily prosecuted until the severity of winter compelled a suspension of field work. During the succeeding spring a distance of twenty miles was located, and on the 7th day of May was put under contract; in the mean time, the examination of the country was progressing. In August, a further portion of the work, including three miles at Vandalia and three additonal miles in the south, was prepared by order of the Board, and contracted.

The work at the southern end was divided into eight contracts, the length of which was made to depend on the amount and nature of the work embraced in them. The work at Vandalia was divided into two contracts.

The estimated cost and contract cost are hereto appended in tabular form, as also a table of grades and curves and tangents.

A plan and profile of the line and plans of the structures designed will also accompany this.

The law having confined the point of starting to Cairo city, there was but little range in the selection of a site for the depot. Several causes operated in the selection of the present site. Its position is on the Ohio river, about three quarters of a mile above its mouth. The river bank at this point is the highest of any throughout the extent of the city front. Its vicinity to the mouth will diminish materially the inconvenience in touching at the port for vessels engaged in the Mississippi trade; whilst the gentleness of the current, and the unvarying depth of water, at once make it as good a harbor as can be desired.

The Mississippi, on the contrary, from its impetuosity and the variableness of its channel, renders the permanance of a good harbor and landing very uncertain. It will, however, be a matter of future consideration whether a depot and landing place should not be constructed on the Mississippi bank, to be used when the stage of water will permit.

The reiteration of statements extremely disadvantageous to the position of the point by law required to be selected for this depot—vague and uncertain to some extent as they are, and originating in antagonistical interests, although discredited by me—has had the effect to cause a very careful examination of the whole point. The result has been a thorough conviction that the State incurs no risk in completing her works. The earth is firm and dry, and fully capable of sustaining the weight of any mass of buildings which could be crowded thereon.

During the highest water there is very little current out of the channel of the rivers; and as the grade line is established at such an elevation that it cannot be overtopped, there is no danger to be apprehended of

the destruction of the embankment. There is but one source of danger—it is from the ravages of the Mississippi upon its banks, threatening to extend its inroads as far as the embankment.

That the bank has wasted to some extent, is certain; but the river now shows a disposition to remain stationary; and this, in that river, is generally followed by recession. In the event, however, of the waste continuing, I am assured by Mr. D. B. Holbrook, the person most concerned in Cairo city, that immediate steps would be taken to curb it; and the result of proper measures to effect this will not admit of doubt. Should an expenditure for this object become necessary, and the protection of State property become involved therein, it will be a subject for your consideration whether the public should not make a pro rata appropriation for their share of such security.

The termination of the Central railroad is the most remarkable point in the west. It is undeniably the head of low-water navigation for vessels of large size. A series of shoals or bars, commencing at Cash island, and extending at short intervals entirely up the Ohio river, prevents its navigation for long periods at a time when the growing commerce of the west requires it should be in the best order. This, in future, will cause a selection of that route for transportation which can always be confided in. The Mississippi always supplies that route to the mouth of the Ohio; and from thence advantage can be taken of our internal improvements for conveyance to the interior—or the smaller boats can freight from this point for the upper rivers.

The present situation of our commerce is too plainly seen, and too sensibly felt, to again admit of confidence in the Ohio or Mississippi rivers. For the shipment of produce this place has the advantage of any point above. The river below is seldom obstructed when all the rivers above are too low for navigation, or blocked up with ice.

From all these advantages, the interest is apparent which the State has in the proper ordering of this important point.

From the commencement of the road, embankment has been adopted through the country which has ever been overflowed, with the exception of 120 feet of tressle work, which was deemed necessary for waterway, across the cotton-wood slough.

The river Cash is crossed by a bridge, on the Jackson plan, of 104 feet span. The scarcity of stone throughout that region has caused a recourse to brick as a better and cheaper material than any other which can be obtained for the abutments and culverts. From the quality of the clay and the great degree of care which is required in their manufacture, a brick may be confidently expected which will far exceed the sandstone of the country in all the excellencies of a material.

Where the low land stops there is a range of hills stretched across the course of the line, and extending several miles both east and west. To pass this range, a point was selected where a creek running north, and one whose course was south, headed together; and, as the ridge was here lower and narrower than at any other place, the road, on leaving Cairo, was directed and located towards it. The valleys of the before mentioned creeks were occupied by the line, and the ridge passed by an excavation.

Having overcome this obstacle, the line runs on good ground for many

miles. The only obstacle of consequence is the crossing of Cash river. During heavy floods, from the great extent of country which it drains, and its abrupt character, there is an immense quantity of water in the river and its overflown flats. For its free passage there is provision made for 800 feet of tressle work; only a part of this is strictly necessary for waterway—the rest was adopted through motives of economy.

The termination of the line under contract is about four miles north of Cash river; from there the location is extended northward; and as there is found to be branches of Cash in a favorable general direction, every advantage is taken of them to attain the main summit of the country. From there, the ridge dividing the waters of the Ohio from the Mississippi river is located on to the course of Drury creek, which runs northerly to near Muddy river.

The line from Drury is not yet located, but from a careful examination of the country in every direction, it is positively ascertained that a line at once direct and excellent is attainable.

Before selecting the route for location in the southern part of the State, a careful examination was made of the country; and on one which was much the most preferable, an instrumental survey was made. As I anticipated, the general difference was not very great; but two or three positively objectionable features caused it to be rejected. The route up the bank of the Mississippi and Muddy river was also examined, and found unfavorable.

The country for many miles east of the line is very broken, and no line which could compare in advantages with the present one could be obtained. The entire line runs through a fine fertile country, capable of supporting a very dense population, which will be able to supply a vast amount of transportation for surplus products on this line of road.

At the Vandalia end, the line, after leaving the town, deflects to the east until the river Kaskaskia is crossed, and then its direction is changed to the south.

In crossing the river bottom, an embankment is adopted. The indispensable ways for the passage of water, in time of floods, are formed of tressle work, placed across the sloughs and creeks running into the river below the road. The aggregate length of this kind of work is 510 feet. The abutments of the bridge at Kaskaskia river are designed of brick, with stone foundations. The stone to be obtained at this point is a fine quality limestone, but its cost cannot be less than three times that of brick, and would be but little more durable.

In the formation of embankments, the width of fourteen feet is given at grade, by the special orders of the Board.

The slopes are generally 1½ to 1; ditches at the side are laid off at five feet distance from the foot of the embankment, where earth is required from such source, with the exception of that part in the Kaskaskia river bottom, where the ditch on the left side is ten feet from the embankment.

The ground occupied by embankment, under six and a half feet in height, is thoroughly grubbed, and no vegetable or perishable matter is admitted in such work.

Excavations are 15 feet wide at grade—the slopes under ten feet are

generally 1 to 1, but over that depth they must be greater. It will be found necesasry at one point, viz., the ridge in Alexander county, to have open brick drains on each side of the excavation to prevent the gullying which would be certain to take place without this precaution.

The plan of superstructure is a combination of foundation sills, crossties, and longitudinal string pieces for rails, plated with iron, spiked firmly to the stringers and joint pieces under the joist pieces of the foundation sills.

Timber in great abundance and of fine quality exists along the line as high as Muddy river, and at no part will it be difficult to be obtained at a moderate expense.

I have the honor to be
Your most obedient servant,
J. FREEMAN,
Principal Engineer Central Railroad.

Statement showing the quantities of work now under contract on the Central Railroad south of Vandalia, together with the engineer's estimate, and the cost at contract prices.

No. of contract.	Quantities of work.	Description of work.	Engineer's estimate.			Contract price.	
				Per	Amount.		Amount.
Contract No. 1.	3¼ sq. chains	Grubbing	$40 00	chain	$130 00	$35 00	$113 75
	316¾ do.	Clearing	10 00	chain	3,167 50	7 00	2,449 00
	200,000 yds	Embankment	23	yard	46,000 00	20	40,000 00
	57 cubic do.	Brick work, culvert No. 1.	5 00	"	285 00	5 50	313 50
	63 do.	Culvert No. 2	5 00	"	315 00	5 50	346 50
					$49,897 50	-	$43,222 75
Contract No. 2.	2 sq. chains	Grubbing	35 00	chain	70 00	30 00	60 00
	368 do.	Clearing	9 00	"	3,312 00	8 00	2,944 00
	210,700 yds.	Embankment	23	yard	48,461 00	19	39,973 00
	120 lin. feet	Tressle work	10 00	foot	1,200 00	9 00	1,080 00
	barrel	Drain	-	-	10 00	-	10 00
					$53,053 00	-	$44,067 00
Contract No. 3.	5½ sq. chains	Clearing	8 00	chain	44 00	8 00	44 00
	11,100 yards	Embankment	16	yard	1,776 00	15	1,665 00
	1,834 do.	Brick in mortar	5 00	"	9,170 00	5 00	9,170 00
	483 do.	Brick in cement	6 00	"	2,898 00	6 00	2,898 00
		Foundation timber and planking	-	-	110 62	-	110 62
		Pumping and scooping	-	-	100 00	-	100 00
	1,443 yards	Excavation	10	yard	144 30	12	173 16
	104 feet	Bridge	27 02	-	2,811 00	44 00	4,576 00
					$17,053 92	-	$18,736 78
Contract No. 4.	19½ sq. ch.	Grubbing	30 00	chain	585 00	25 00	487 50
	268½ do.	Clearing	7 00	"	1,879 50	6 00	1,611 00
	46,865 c. yd.	Embankment	18	yard	8,435 70	17	7,967 05
	2,183.5 do.	Excavation	14	"	305 69	14	305 69
	20 lin. feet	Bridge	-	each	275 23	-	91 48
	10 do.	Bridge	-	each	84 13	-	38 22
	5 feet	Culvert	-	each	189 20	-	207 70
		Small drain	-	each	10 00	-	10 00
	44¾ yards	Brick work	*4 75	-	-	6 00	268 50
					$11,764 45	-	$10,987 14
Contract No. 5.	18.6 sq. ch.	Grubbing	30 00	chain	558 00	30 00	558 00
	310 do.	Clearing	7 00	"	2,170 00	7 00	2,170 00
	41,917 c. yd.	Embankment	20	yard	8,383 40	17	7,125 89
	126,906 do.	Excavation	28	"	35,533 68	22½	34,553 85
	3–10 feet	Bridges	84 13	bridge	252 39	80 00	240 00
	3–3 feet	Culverts	150 00	culv't	450 00	160 00	495 00
					$47,347 47	-	$45,142 74

*Included in bridge.

Statement of work under contract on the Central Railroad—Continued.

No. of contract.	Quantities of work.	Description of work.	Engineer's estimate.			Contract prices.	
				Per	Amount.		Amount.
Contract No. 6.	46.6 sq. ch'n	Grubbing - -	$35 00	chain	$1,631 00	$33 00	$1,537 80
	484 do.	Clearing - -	8 00	do.	3,872 00	8 00	3,872 00
	24,229 yards	Embankment -	17	yard	4,118 93	16	3,876 55
	4,973 do.	Excavation -	15	do.	745 95	14	696 22
	10 feet	Bridge - - -	-	each	84 13	ft. 8 50	85 00
	3 do.	Culvert - - -	-	do.	150 00	-	165 00
	2 Barrel	Drains - - -	12 00	do.	24 00	12 00	24 00
	20 lin. feet.	Tressle work -	7 50	feet	150 00	10 00	200 00
					$10,776 01	-	$10,456 57
Contract No. 7.	23.3 sq. ch.	Grubbing - -	38 00	chain	885 40	35 00	815 50
	324 do.	Clearing - -	9 50	do.	3,078 00	9 00	2,916 00
	38,338 yards	Embankment -	25	yard	9,584 50	20 18	4,000 00 3,300 00
	2,215 do.	Excavation - -	15	do.	332 25	15	332 25
	10 feet	Bridge - - -	-	-	90 00	ft. 9 00	90 00
	760 do.	Tressle work -	9 00	foot	6,840 00	9 00	6,840 00
	40 do.	do. -	8 00	do.	320 00	8 00	320 00
					$21,130 15	-	$18,613 75
Contract No. 8.	39.5 sq. ch.	Grubbing - -	28 00	chain	1,106 00	25 00	987 50
	190¼ do.	Clearing - -	6 50	do.	1,236 62	6 00	1,141 50
	6,208.73 yd.	Excavation - -	16	yard	993 39	14½	869 22
	37,278.07 do.	Embankment -	16	do.	5,964 49	15½	5,778 10
	15 feet	Bridge - - -	-	-	74 25	ft. 12 00	180 00
	49⅜ yards	Brick work - -	4 75	yard	235 91	5 00	248 33
	5 & 3 feet	Culverts - -	132 50	each	132 50	5 75	264 62
	49½ yards	Brick work - -	115 00	do.	115 00	5 75	
					$9,858 16	-	$9,469 27
Contract No. 1. B.	12.9 sq. ch.	Grubbing - -	25 00	chain	322 50	25 00	322 50
	105 do.	Clearing - -	5 50	do.	577 50	5 50	577 50
	13,791 c. yd.	Excavation - -	23	yard	3,171 93	19	2,620 29
	101,000 do.	Embankment -	16	do.	16,160 00	15	15, 50 00
	110 lin. feet	Tressle work -	8 00	foot	880 00	8 00	880 00
	286 c. yards	Brick in mortar -	5 00	yard	1,340 00	6 00	1,608 00
	98 do.	Brick in cement -	5 50	do.	539 00	7 00	686 00
	62½ do.	Culvert - -	5 00	do.	312 00	7 00	437 50
	32 perch	Stone masonry -	15 00	perch	480 00	17 00	544 00
					$23,782 93	-	$22,825 79
Contract No. 2. B.	19.3 sq. ch.	Grubbing - -	25 00	chain	475 00	25 00	475 00
	195 do.	Clearing - -	5 50	do.	1,272 50	5 50	1,272 50
	10,141 c. yd.	Excavation - -	18	yard	1,879 92	17½	1,827 70
	87,848 do.	Embankment -	16	do.	14,055 68	15	13,177 20
	400 lin. feet	Tressle work -	8 00	foot	2,200 00	8 00	2,200 00
					$20,883 10	-	$19,952 40
	23 miles	Timber for superstructure - -	1,443 40	mile	$33,193 60	1,613 00	$37,099 00

Table of Grades on the located line of the Central Railroad.

No. of Grade.	Commences.	Ends.	Length of grade.	Rate per mile.	
	Miles, feet.	*Miles, feet.*	*Miles, feet.*		
1	Ohio river.	7 4640	7 4640	-	Level grade.
2	7 4640	8 3860	4500	20.592	Ascending.
3	8 3860	9 2080	3500	21.120	Ascending.
4	9 2080	10 4050	1 1970	40.000	Ascending.
5	10 4050	11 3120	4350	40.000	Descending.
6	11 3120	12 0740	2900	31.838	Descending.
7	12 0740	12 5240	4500	17.582	Descending.
8	12 5240	13 3160	3200	-	Level grade.
9	13 3160	13 5260	2100	9.979	Ascending.
10	13 5260	14 4780	4800	3.484	Descending.
11	14 4780	15 2900	3400	8.553	Descending.
12	15 2900	16 2120	4500	-	Level grade.
13	16 2120	16 4620	2500	7.392	Ascending.
14	16 4620	17 3340	4000	5.280	Descending.
15	17 3340	18 3060	5000	1.584	Ascending.
16	18 3060	20 0000	1 2220	-	Level grade.
17	20 0000	20 1200	1200	19.800	Ascending.
18	20 1200	20 3900	2700	8.791	Descending.
19	20 3900	21 3420	4800	6.072	Ascending.
20	21 3420	23 0860	1 2720	7.920	Ascending.
1	Vandalia.	3700	3700	40.000	Descending.
2	3700	4400	700	-	Level grade.
3	4400	6600	2200	23.126	Descending.
4	6600	4 1180	2 4340	-	Level grade.

Table of Curves and Tangents on the located line of the Central Railroad.

No. of curve.	Commences.	Ends.	Length of curve.	Radius of curvature.	No. of tangents.	Commences.	Ends.	Length of tangents.
	Miles, feet.	*Miles, feet.*	*Miles, feet.*	*Feet.*	1	Ohio river	900	900
1	900	1 2420	1 1520	6,000				
					2	1 2420	7 2167	5 5027
2	7 2167	7 4375	2208	8,000				
					3	7 4375	9 2380	1 3285
3	9 2380	9 3080	700	5,000				
					4	9 3080	10 0500	2700
4	10 0500	10 1200	700	1,200				
					5	10 1200	10 3400	2200
5	10 3400	10 4600	1200	1,255				
6	10 4600	12 1090	7050	8,000				
					6	12 1090	14 0342	1 4532
7	14 0342	14 4780	4438	5,200				
					7	14 4780	18 4110	3 4610
8	18 4110	19 0680	1850	8,000				
					8	19 0680	20 0000	4600
9	20 0000	20 3400	3400	6,000				
					9	20 3400	22 0990	1 2870
10	22 0990	22 2840	1850	2,000				
					10	22 2840	23 0990	3300
					1	Vandalia	100	100
1	100	1000	900	1,500	2	1000	4359	3359
2	4359	5480	1121	2,000	3	5480	4 1180	3 0980

Statement of work performed on the Central Railroad from Cairo city to Vandalia, up to the 6th November, 1838.

No. of contract.	Clearing.		Grubbing & clearing		Excavation.		Embankment.	
	Quantity in chains.	Cost.	Quantity in chains.	Cost.	Quantity in cubic yards.	Cost.	Quantity in cubic yards.	Cost.
1	198	$924 00	-	-	-	-	1,433	$286 60
2	253	1,282 66	-	-	-	-	1,080	205 20
3	3.5	33 00	-	-	-	-	990	168 30
4	258.15	786 60	6.85	$114 16				
5	296.55	1,477 06	20.7	414 00	13,208	$2,971 79	37	6 29
6	284	2,970 66	42.40	1,130 80	-	-	4,714	754 24
7	310	1,956 00	13.75	367 50				
8	126.5	336 75	2.75	48 96	-	-	775	117 02
1 B	102.5	375 83	3.5	87 50				
2 B	30	123 75	.5	12 50				
						Total amount.		$17,151 17

Note—The clearing is in various stages of progression—from two-thirds to full completion. Grubbing is also incomplete.

VANDALIA, *December* 24, 1838.

Upon the recent receipt of the order of the Board of Public Works, directing me to take charge, as principal engineer, of the Alton and Shawneetown railroad in the third circuit, I repaired to that work and made such examinations as my brief time allowed.

This work has been placed under contract from Shawneetown to Equality, and is in a very forward state. I herewith present a statement of the amount of work done to the time of the last estimate.

The general and fatal prevalence of disease on this line, extending to all of the assistant engineers, has necessarily prevented them from preparing detailed accounts thereof. As soon as possible, complete statements shall be prepared and presented.

I have the honor to be,
Your most obedient servant,
J. FREEMAN,
Principal Engineer Central and Alton and Shawneetown Railroad.

Statement showing the amount of work done on the Alton and Shawneetown Railroad, in the third circuit, to the 22d of November, 1838.

	Grubbing and clearing ten sections, incomplete	$5,065 00
	Grubbing and clearing main ditch - -	30 00
	Grubbing and clearing swamp ditches - -	12 00
41,722.52	yards excavation from road-bed - -	5,838 18
2,722.85	yards excavation from ditches - -	381 19
1,348.20	yards excavation from cemented clay - -	307 44
3[illegible]6.66	yards excavation for depot formation -	81 67
3,071	yards excavation from rock - - -	3,838 75
47,926.68	yards embankment moved 100 feet - -	7,523 16
2[illegible]3.58	perches rough masonry - - -	955 65
439.38	perches dressed masonry - - -	2,516 59
643	perches stone delivered - - -	1,115 50
393	feet of stone delivered for hewing - -	196 50
	Locust posts - - - - -	125 37
281.26	rods of drain ditches for swamps - -	218 26
	Timber, foundation for culvert - -	30 00
38	barrels lime - - - - -	52 25
44,302	feet b. m. timber for tressle work - -	797 42
	Total amount - - - -	29,147 93

EXHIBIT No. IV.

REPORT OF M. K. ALEXANDER,

WITH ACCOMPANYING DOCUMENTS.

VANDALIA, *December* 3, 1838.

To the BOARD OF COMMISSIONERS
of Public Works of the State of Illinois.

The undersigned, Commissioner of the Board of Public Works for the fourth judicial circuit, respectfully submits to the Board the following report of his proceedings on the several works assigned to him, in special charge, as acting Commissioner thereon, during the last six months—say to the first of the present month, viz.

GREAT WABASH RIVER.

Before entering into any detail, it may be proper to state that since the passage of the internal improvement law of this State, the State of Indiana has added fifty thousand dollars to her former appropriation for the improvement of this river, making her appropriation equal to this State.

The contract for the delivery of stone at the Grand rapids, for the construction of the lock at that point, which was entered into in the latter part of 1837, was not prosecuted with that degree of energy and efficiency that would justify the Commissioners in granting an extension of the time originally given for the completion of the work. The contracts were, therefore, abandoned by the contractors after the delivery of about 300 cubic yards of rock.

During the summer the necessary arrangements were made by the engineer for letting the contract for the dam and steamboat lock at the rapids on the plan heretofore submitted to the Board; and on the 22d of August last, the letting of that work took place at Mt. Carmel. There was much competition in the bids of contractors of the first reputation in the country. The work was taken by competent contractors, and at fair prices. The contract price of the work varies but little from the estimate of the engineer on file in the office of the Board, and the aggregate amount falls below the joint appropriation made by the two States.

The contractors have commenced work, and every assurance is felt that this improvement, with which is identified the interest and prosperity of one of the richest and most extensive agricultural valleys of the west, will be speedily prosecuted to completion.

As soon as the proper season arrived, the engineer in charge of this work organized a party and commenced a thorough examination and survey of the river from the foot of the rapids to its junction with the Ohio; and the extraordinary low stage of water which has prevailed during the autumn, afforded great facility in ascertaining the nature and extent of the obstructions to the navigation. His report of this survey and examination is daily expected, and will, on its receipt, be laid before the Board. A very full and interesting report of the obstructions at the Grand rapids, and the necessary improvements to overcome these obstructions, has already been made by the engineer on that work, as well as the estimated cost of the same, which are on file, and to which you are respectfully referred for information relating to that important work.

The amount of the former appropriations for the improvement of this river, which remained unexpended in the hands of the Commissioner, at the time the undersigned took charge of the business, as appears from his last settlement, was $5,534 95, which has been received by the undersigned, and $951 12 has been paid out on contracts made by his predecessor, leaving $4,583 83 to be applied under the present internal improvement law.

The disbursements on the Great Wabash river improvements, under the present internal improvement laws, up to the first of this month, so far as vouchers have been received by the undersigned, are as follows, viz.

Paid by Thos. H. Blake, Commissioner on the part of Indiana, for outfit of engineering corps, surveys, engineering, &c.	$1,792 61	
On account of engineer's estimate, No. 1, of stone delivered	4,093 00	
	5,885 61	
Deduct amount received for a canoe and axe	3 44	
		$5,882 17
Disbursements by the undersigned on the part of this State, for outfit of engineering party, engineering and incidental expenses	3,871 26	
On account of estimate No. 2, of stone delivered	2,316 00	
	6,187 26	
Credit by axe and canoe sold	3 44	
		6,183 82
Whole amount of disbursements		$12,065 99
Drawn on foregoing work by special draft	2,316 00	
Paid over by former Commissioner	4,583 83	
		$6,899 83

Eastern Division of the Southern Cross Railroad from Alton to Mount Carmel.

The graduation of eighteen miles of this work from Mt. Carmel to Albion, which was let on the 18th of March last, is in a state of forwardness, and there is no doubt of its completion for the reception of the railway within the time limited in the contract, as several sections have already been completed, and given up by the contractors; and all the others are now being efficiently prosecuted.

The contractor for the delivery of the timber for the superstructure has not progressed with his contract as could have been desired; but every assurance is given of the requisite exertion to fulfil the contract before the expiration of the time limited for its completion. He alleges the detention during the fall, occasioned by the failure to receive the engine designed for the work, in consequence of the continued low stage of the water during the past season, and other causes beyond his control, as an apology for his delay of the work, all of which will soon be removed; and the hope is entertained that his promises to fulfil the contract in due time will be fully complied with.

The graduation of the Little Wabash sections of this road, embracing the crossing of the river and three miles of heavy work in the vicinity, which were ordered to be put under contract at the last meeting of the Board, was let on the 18th of October last. The estimated cost of this work, exclusive of the bridging over the river, was - $24,099 75
Bridge abutments and other work not let - - 7,696 00

$31,795 75

The first of the above items of work was let to efficient contractors at prices below the estimates; but the letting of the masonry was deferred until more minute examination could be made for suitable materials for the work

An engineering party was organized in the month of August to make the necessary examination and definite location of the above portions of the line, and the whole route between Albion and Fairfield was minutely examined, in order to arrive at a correct location of this detached portion directed to be let; and, from the information collected in the survey, very little labor or expense, hereafter, will be necessary to prepare the whole line between the above mentioned towns for contract. The report of the engineer definitely locating this portion of the work is herewith submitted.

For more particular information relative to the first eighteen miles of this road from Mt. Carmel to Albion, which were put under contract on the 8th of March last, your attention is invited to the report and estimate of the principal engineer of the southern district, of the cost of this portion of the work, which is herewith submitted. A tabular statement, showing the progress made on this division of that work, is also submitted.

After completing the examinations, and the location of the Little Wabash sections of this road, as already mentioned, the same party of engineers was sent to the Kaskaskia river division, to make the definite

location of the sections ordered by the Board to be let at the crossing of that river. The expenses of the party, during their engagements in both circuits, have been paid by the undersigned, and the amount is included in the subjoined account, viz.

For outfit of engineering parties, and incidental expenses prior to June, 1838 -	$1,931 77	
For right of way, land entered, engineering and incidental expenses since that date - -	4,211 67	
		$6,143 44
For construction prior to June, 1838 - -	4,380 40	
Since that date - - - -	32,412 98	
		36,793 38
Chargeable to this work, money drawn from the general fund - - - - -		858 73
		$43,795 55
Drawn on the foregoing work in cash - - -		$20,000 00
By special drafts - - - - -		9,166 19
		$29,166 19

Great Western Mail Route.

The contracts on the eastern division of this work, which were let prior to the last meeting of the Board, were confined principally to the Purgatory swamp, the Little Wabash river bottom, and bottom land, and the bridging of some other streams on the route. These portions of the road being subject to inundations, the operations of the contractors were seriously retarded by the floods which occured in the spring and early part of the summer; and, subsequently, by the unusual degree of sickness which has prevailed at these points during the summer and fall months. To these unavoidable causes, the delay which has taken place on these contracts is chiefly to be attributed, and the consequent inability of the contractors to complete the work by the first of November last, agreeably to contract. The several jobs which were to have been completed on that day are, however, in a state of forwardness; and the contractors are considered fully responsible and disposed to progress with the work as rapidly as circumstances will allow; and assurance is felt that the jobs will be completed early in the spring.

In the month of August last all the remaining portions of this road, not previously let, were put under contract, and the work is now progressing. The contract prices of these jobs cannot be ascertained precisely, as it will depend upon the amount of work directed to be done on the respective contracts. The contracts are specific as to the price of each item of work embraced, but with a reservation to the agents of the State to direct what specific portions of the work shall first be executed by the respective contractors. It is supposed, from the estimates of

the engineer, that the appropriations will be sufficient to bridge all the streams, and construct causeways over the bottom lands; and also to put in good travelling condition the residue of this road.

The present bridges over the Embarrass river, at Lawrenceville, and over the Little Wabash river and Muddy fork, in Clay county, are individual property. As the jobs of work immediately contiguous to these bridges will require a large expenditure to execute them; and as it will be necessary that they should be kept constantly in repair by the State, they would seem to be the proper point for the erection of toll-gates—and, consequently, it is highly expedient that the State should own them in connection with the road. The suggestion is, therefore, respectfully submitted, whether there should not be an application to the Legislature for authority to enable the Board to purchase or otherwise procure the control of these bridges for the use of the State. It is also worthy of remark that the bridge over the Little Wabash, as at present constructed, forms a serious obstruction to the navigation of that river. The bridges over the Big Muddy and the Little Wabash rivers are on a very cheap plan of construction, and being in rather a dilapidated state, will soon require rebuilding; consequently the value of the vested rights of their owners in keeping toll-gates at these sites would be the principal matter to be adjusted by the agents of the State. At the letting of contracts on the 18th of August last, very favorable bids were received from an efficient and practical bridge builder for the erection of new bridges over the two last mentioned streams; but owing to the existing rights of the owners of these bridges, these bids were suspended until the action of the Board, or the Legislature, could be had on the subject of those rights.

For a detailed description of the work already done, and of that necessary to be done on this road, and the probable cost of the same, you are referred to the accompanying tables, drawings, profiles, and estimates of the engineer; and also those now on file in the office.

The Purgatory division of the western mail route embraces the flat country lying between the Wabash and Embarrass rivers—a distance of about seven miles. A considerable portion of this delta, between these two rivers, is subject to inundation during floods. The Great Wabash, during its higher stages, discharges through a low depression in its western bank, some miles above Vincennes, which is called *Bellgrave;* and the whole of the flat country between this point and the mouth of the Embarrass river is flooded by the waters of the Great Wabash. This subjects the embankments, which are made to elevate the road above high water mark, to the action of the current and waves of a great expanse of water, and renders the prospect of making a permanent improvement very doubtful, without great expense. It is suggested, therefore, that the best and most economical plan of effecting a substantial improvement over this part of the road, would be to construct a levee at Bellgrave, to exclude the floods of the Wabash. This plan, if carried into effect, would reclaim a large tract of valuable land, and increase the healthfulness of the country; and would render any improvement made on the road entirely permanent. It is, therefore, respectfully suggested to the Board, that the propriety of constructing this levee be also laid

before the Legislature. As much of the land as this improvement would reclaim belongs to the General Government, and without it, would so remain, it is but reasonable to presume that, upon proper representation being made to Congress, through the Legislatures of Illinois and Indiana, (both States as well as the General Government being mutually interested in the great western mail route,) that a portion of these inundated lands would be granted to effect the improvement contemplated.

The amount expended by the undersigned on the Purgatory swamp division of this road, is as follows, viz:

Prior to June, 1838 - - -	$5,129 76	
Since that date - - -	7,235 16	
Chargeable to this work from the general fund	247 29	
		$12,612 21

The disbursements on the Little Wabash bottom sections are as follows, viz:

Prior to June, 1838 - - -	$4,353 47	
Since that time - - -	3,091 01	
Chargeable from general fund - -	149 08	
		7,593 56

The residue of disbursements chargeable to the general appropriations for this work, has been made on that part of the work lying east of the Marion county line, and is as follows, viz:

For construction prior to June last -		$2,803 24	
Since that time - - - - -		3,484 03	
		6,287 27	
For engineers, superintendents, &c. on the whole eastern division prior to June, 1838 - -	$180 24		
Since that date - -	1,347 38		
Chargeable from general fund	156 29		
		1,683 91	
			7,971 18
Whole amount of moneys expended on this work			28,176 95
Drawn by the undersigned on the foregoing work, in cash			34,000 00
By special drafts - - - - - -			2,595 76
			$36,595 76

Central Branch Railroad.

The grading on the eastern division of this work has been efficiently prosecuted. Several sections have been finished and delivered up by the contractors, and the remainder is so far advanced as to require but a short time next spring to complete the whole work; as the remaining work to be executed is, for the most part, of a description that can be carried on during the winter. The contract for the delivery of materials for the superstructure is progressing satisfactorily; and from the present indications no reasonable doubt can be entertained of a faithful execution of the engagement of the contractors.

The grading of the two miles, embracing the crossing of the Embarrass river in Coles county, which was ordered by the Board at their June meeting to be put under contract, was let to efficient and responsible contractors, and the work has been commenced and is progressing. The letting of the stone work for the bridge was suspended for the purpose of submitting to the Board the question, whether foundation piers or abutments shall be adopted. It is represented by the engineers who have been employed on that work, that the prospect is favorable for procuring a good quality of stone in the vicinity of the work. Yet, under the most favorable circumstances, the quantity required to carry the stone work up to the grade line of the road, is so great that it must necessarily swell the cost of the work to a very considerable amount.

The disbursements on this road up to the 1st instant, are as follows, viz:

For outfit of party of engineers locating from the Wabash river to Shelbyville, including all other incidental expenses prior to June, 1838 - - - -	$4,831 15	
Since that date - - - -	2,124 41	
		$6,955 56
For construction prior to June last -	4,772 64	
Subsequent to that date - - -	34,970 03	
Chargeable to this work from general fund -	4,504 82	
		44,247 49
Total - - - - -		51,203 05
Drawn on the foregoing work, in cash -		50,000 00
By special draft to contractor - -		1,155 25
		$51,155 25

Northern Cross Railroad.

None of the contracts for the graduation on this line have been completed and the work delivered up by the contractors, although several sections are finished, as a number of sections are embraced in one contract, and it requiring a completion of each and every section before the contract can be considered completed and the work received. The heavy work at the crossing of the Vermilion river is in the hands of efficient contractors, and every expectation is entertained that the work will be executed in a skilful and substantial manner and in proper season.

The contract for the delivery of timber for the superstructure of the railway has been abandoned by the contractors, and will have to be relet by the acting Commissioner before any thing more will be done on it.

Before giving the disbursements on this road, you will allow me to suggest to the Board the propriety of recommmending the adoption of some measure to secure the extension of this road and also of the Central branch railroad to the Wabash river. The importance of making immediate provision for the extension of these two great works from the State line to the Wabash river, and thus connect them with the Wabash and Erie canal, is obvious from the fact that the portions of these roads now under construction cannot be profitable to the State until these connecting links are made. Three plans have suggested themselves to me for

effecting this object; first, and perhaps the preferable one, to ask Indiana to undertake the work and own and control it; the second is, to ask of Indiana the right of way for this State to extend these roads and add them to our system; and the third, and least desirable is, to effect these essential connections by chartered companies, under the Legislature of Indiana.

The disbursements on this (Northern Cross) road, are as follows, viz:

For outfitting engineering party to locate the line of road from the State line to Decatur, including incidental expenses, prior to June, 1838 - - - -	$4,413 27	
Subsequent to that date - - - -	1,720 88	
		$6,134 15
For construction - - - - -	32,436 18	
Chargeable to this work from the general fund	3,710 52	
		36,146 70
		42,280 85
Drawn on the above work - - - -		45,640 26

Central Railroad.

So much of this line of work as lies between Vandalia and Decatur, and which was attached to the eastern district, has been surveyed and located, and the estimates and drawings made and filed in the office of the Board. The disbursements on account of this work, are,

For outfit of engineering party and incidental expenses, prior to June, 1838 - - - - - -	$1,798 42
Since that date - - - - - -	162 50
Chargeable to this work from general fund - -	392 18
	2,353 10
The whole amount disbursed by the undersigned, chargeable to the general fund, is - - - -	$10,193 91
Subject to a deduction for horse and wagon sold, of	175 00
Showing the actual amount distributed on the several works, to be - - - - - - -	$10,018 91

For a minute and detailed estimate of the cost of the three last mentioned roads, together with the necessary depots, damage for the right of way, engineering, contingent expenses, &c. &c., your attention is directed to a report of the principal engineer of the eastern engineering district, made on the first of last June, and which may be seen on file in the office.

Your attention is also invited to an interesting and detailed tabular statement, showing the progress made by contractors on the portions of the Central Branch road, and the Northern Cross road which are under contract, and also the work yet remaining to be done, as well as various other items of information in relation to these works, which is herewith submitted.

RECAPITULATION.

		Drawn.	Disbursed.
On Great Wabash river, from former Commissioner	$4,583 83		
Special draft	2,316 00		
		$6,899 83	$6,183 82
On Southern Cross railroad, in cash	20,000 00		
Special drafts	9,166 19		
		29,166 19	42,936 82
On Mail route, in cash	34,000,00		
Special drafts	2,595 76		
		36,995 76	27,624 29
On Central Branch railroad, in cash	50,000 00		
Special draft	1,155 25		
		51,155 25	46,698 23
On Northern Cross railroad, in cash	–	45,640 26	38,570 33
On Central railroad	–	–	1,960 92
On the general fund	–	8,500 00	10,018 91
		177,957 29	173,993 32
Showing a balance now on hand and unexpended, of		–	3,953 97

It will appear from the foregoing that, on some of the works, a much larger amount has been drawn than disbursed, while others are considerably in advance in disbursements of the amounts drawn; the cause of which is, that when funds have been wanted, they have been drawn on the work most in arrears, and have been applied on any of the works under the superintendence of the undersigned, where funds were needed.

The engineering parties in this judicial circuit have been reduced as low as practicable, to correspond with the limited operations of the contractors during the winter months on the several works under his charge.

It was expected by the undersigned, at the time of his last report, that all the plans, profiles and drawings belonging to the eastern engineering district, would have been completed by this time; but, owing to sickness and other causes, the draughtsman has several times been required to leave the office and perform field duties; in consequence of which some of the drawings are yet unfinished. They will, however, all be completed in time for field operations in the spring.

All of which is respectfully submitted.

M. K. ALEXANDER,

Commissioner Board of Public Works Fourth Judicial Circuit, Ill.

An abstract of the contracts let on the eastern division of the Great Western Mail Route, between the east line of Marion county and the Big Wabash river, opposite Vincennes. (Referred to in the report of the Principal Engineer.)

Description of section.	Length in miles.	Contractors' names.	Date of contract.	Engineer's estimate.	Amount of work done.	Amount paid.	Remarks.
Section No. 1	5.00	William Cooper, -	August, 1838.	$1,635 80	$267 65	$214 12	
" No. 2	4.00	Urial Mills, - -	do.	1,049 80	206 25	185 00	
" No. 3	9.00	Same - -	do.	1,036 10			
" No. 4	2.50	Same - -	do.	925 18			
Little Wabash bridge, No. 5	-	George Knight, -	do.	3,540 00	-	-	Contract suspended.
Big Muddy bridge, sec. No. 6	-	Same - -	do.	3,540 00	-	-	Contract suspended.
" No. 7	4.00	Edward Clarke, -	do.	1,234 54			
" No. 8	3.00	Same - -	do.	2,406 82			
" No. 9	5.00	Same - -	do.	1,680 20			
" No. 10	5.00	Same - -	do.	1,680 30			
" No. 11	5.00	Same - -	do.	1,103 10			
" No. 12	3.00	Burd, Payne & Co., -	do.	1,948 65	252 00	201 60	
" No. 13	5.00	Same - -	do.	2,125 57			
" No. 14	2.50	Leach, Wade & Westfall,	do.	1,205 23	55 60	44 48	
Embarrass river, " No. 15	1.00	Baker & Mays, -	do.	6,288 92	632 15	506 12	
Rackoon creek section -	-	Rodgers & Albright, -	Sept. 8, 1837.	800 00	1,478 71	1,478 71	
Elm creek section - -	-	Same - -	do.	706 32			Finished and received.
Fox river section - -	-	Same - -	do.	2,700 00	2,982 30	2,982 30	
Little Wabash bottom section	-	Same - -	do.	12,331 00			Finished and received.
Purgatory division.							
Section 1	-	Reily, Nabb & Co. -	do.	415 90	1,352 50	85 pr. cent.	
" 2 & 3	-	Same - -	do.	-	4,545 07	"	
" 4	-	Wheeler, Dubois & Co., Reily, Nabb & Co.	do.	8,349 05	1,426 27	"	
" 5	-	Wheeler, Dubois & Co.,	do.	5,473 60	1,264 39	"	
" 6	-	Reily, Nabb & Co., Wheeler, Dubois & Co.,	do.	6,430 00	870 60	"	
" 7	-	G. Davis, Wheeler & Co.,	do.	8,748 89	607 58	"	
" 8	-	Wheler & Dubois, -	do.	4,773 36	4,122 32	"	

An abstract of the contracts let on the Southern Cross Railroad, between Mt. Carmel and Albion, and on the Little Wabash division.

Description of Sections.	Length in miles.	Contractors' names.	Date of contract.	Engineer's estimate.	Amount of work done.	Amount paid.	Remarks.
Between Mt. Carmel and Albion.			1838.				
Section No. 1	1.20	Gallagher & M'Bay, -	March 9	$2,747 78	$4,736 78	$4,736 78	Section completed. The cost includes grading double track through town, and grading river depot—not included in original estimates.
" No. 2	.80	Rodgers, Albright & Mills,	do.	2,949 49	1,591 66	1,273 33	
" No. 3	1.00	Same - -	do.	8,543 32	3,647 88	2,918 31	
" No. 4	1.00	Same - -	do.	5,548 48	737 74	590 19	
" No. 5	1.00	Same - -	do.	3,028 08	1,383 84	1,107 07	
" No. 6	1.00	E. P. Shannon & Co.,	do.	1,921 17	2,031 70	1,625 36	
" No. 7	1.00	Same - -	do.	1,825 79	1,672 50	1,338 00	
" No. 8	1.00	Murphy, St. Leger & Dun,	do.	3,542 05	4,590 67	4,590 67	Section completed. Cost enhanced by rock cutting not indicated on the surface.
" No. 9	1.00	E. P. Shannon & Co.,	do.	3,534 66	3,912 79	3,912 79	Section completed. Cost enhanced by rock cutting.
" No. 10	1.00	J. & P. Clarke, -	do.	2,554 72	1,225 75	900 90	
" No. 11	1.00	Edward Clarke, -	do.	1,780 27	1,517 09	1,213 87	
" No. 12	1.00	Same - -	do.	1,076 74	1,670 13	1,336 11	
" No. 13	1.00	Rodgers, Albright & Mills,	do.	2,567 35	1,144 72	915 78	
" No. 14	1.00	Same - -	do.	1,716 56	308 00	246 40	
" No. 15	1.00	Same - -	do.	2,013 74	388 50	310 80	
" No. 16	1.00	Edward Clarke, -	do.	1,909 59	1,849 53	1,479 63	
" No. 17	1.00	E. P. Shannon & Co.,	do.	7,888 22	6,222 78	4,978 23	
" No. 18	1.00	Gallagher & M'Bay, -	do.	2,639 45	2,260 54	1,808 44	
Superstructure for 18 miles	-	David Scott, - -	March 10	29,000 00	1,126 80	901 46	
Little Wabash division.							
Section No. 25	1.00	Kenner & Emerson, -	Oct. 19	3,742 55	commenc'd		
" No. 26	1.00	St. Leger & Dun, -	do.	6,377 05			
" No. 27	1.00	Same - -	do.	11,489 15			
Bridge abutment and bridges	-	- - -	not let	7,696 00			
Culvert bridges on sections No. 25, 26 & 27 - -	-	Rodgers & Co. -	-	2,500 00			

Report of David Burr, Engineer, of Indiana.

Mount Carmel, Illinois, *November* 28, 1838.

To Gen. M. K. Alexander and Col. Thos. H. Blake, *Com'rs.*

Gentlemen: In obedience to the instructions I have received from you, growing out of my engagements of the 24th June last, to take charge of the improvements contemplated in the Wabash river, I proceed to lay before you a report of the measures taken to advance that object.

Immediately after the 24th of June last, I repaired to this place, as the point presenting the most formidable obstacles to be overcome, to which I had been particularly directed as the field for operations, and commenced a general, though cursory, examination of the country in the vicinity of the Grand Rapids, and the river from Vincennes to the Ohio.

The operations now pressing forward in so many rivers in Kentucky and Pennsylvania, in preparing them for an uninterrupted navigation of steamboats, appear to point to that mode as the ultimate means which will, at no long period, be resorted to for all the large tributaries of the Ohio. With this distinctly in view, it was deemed necessary, as a preliminary step, before a plan could be adopted with judgment, to form opinions, approaching at least to correctness, of the practicability for improvements below, and the kind which would ultimately be used; so that the plans devised for the Grand Rapids might be in keeping and harmony with those which at some future period may be constructed between this place and the Ohio.

With slight exceptions, from Delphi to within ten miles of the junction with White river, the Wabash has a mild current, of good width, and tolerably well defined banks, which confine the waters to their natural bed, except in time of floods.

Below White river, evident changes are perceptible; the stream becomes expanded to something like double its former width, its course more serpentine—it crosses its lowest valley from side to side, which is from three to eight miles wide, and, in traversing the valley, changes its course frequently; forms cut-offs in the bends of the rivers, and rolls with its current vast volumes of sand. Between White river and Ohio, the sand rock of the country is found in the river bed at three places, viz: Coffee island, and at the Little and Grand Chains, and forms the ripples which have been improved by Messrs. Gardner ond Mundy. At these places, where the rock occurs, the river is susceptible of almost any kind of improvement which the extensive and increasing trade of the country may require. The great value of the trade of the valley of the Wabash would in a short time induce a slack-water navigation of the river for the uninterrupted business of steamboats, if it were practicable to make each an improvement: but however desirable such an object may be, it is problematical at least—from the character of the country overflown, in time of floods, from three to eight miles in width, with the bed of the stream constantly changing, and its current rolling volumes of sand sufficient in a few years to fill up its entire bed for a long distance—whether such a river can be generally converted into pools for slack-water navigation. In such an event it is doubtful. The process of filling up the pools would go on rapidly for a few years; and then to find way, the river

would seek a new channel, and leave such works as had been constructed on dry ground.

Although the probabilities are adverse for the grand improvement of the Wabash, by means of slack-water navigation in its whole length, it is certainly possible at some period, of time, that, at the shoals where the rock occurs, works of this kind may be erected; and this consideration, although remotely, had some weight in determining the plan for the works at the Grand Rapids.

The Wabash below White river, for the small class of Ohio steamboats, is navigable the greatest length of time in each year, and for a much longer period than it is above, owing more to the shoals, from the Grand Rapids to Little Rock, than want of water from thence to La Fayette. Many inquiries relative to the length of time during which the ordinary steam navigation is used yearly on the river, have been made, above and below the confluence of White river; but from the conflicting statements, it is difficult to form a correct opinion—the time varies, doubtless, in different years. During the present, there can have been but little or no time when the water has been too low for small steamboats to ascend the river to the rapids. A steamboat of ordinary light draft came there the last of October, when the water was depressed as low, probably, as it has been at any time this season. If it could have ascended the rapids, it might have made way for a long distance up the river. From the best sources of intelligence that could be obtained, it is believed that, when the improvements at Grand Rapids shall be completed, it will add three months, at least, in each year, to the time in which steamboats can now ascend the Wabash above the confluence of White river.

The obstructions proposed to be remedied by the the present improvements, are the series of shoals and rapids commencing one mile above the junction of White river—1st. The Grand Rapids—descending 4 feet in half a mile.—2d. The Hanging Rock rapids, 2½ miles from the foot of the Grand Rapids—descent 1 foot seven inches in half a mile.—3d. Craon's ripple and the rapids at Ramseys' and Beedle's mills, are next in succession, four and a half miles from Hanging Rock—descent 3 feet 2 inches from the surface of the water above the dam to Hanging Rock, the greatest part of which is within three-fourths of a mile of the dam. 4th. Little Rock rapids, from the head of which, in half a mile, is a descent of one foot and three inches; making in all a descent of ten feet. The water on the Little Rock shoals varies in depth, in low water, from four to one and a half feet.

In running the line of levels, the point of high water mark was assumed as the base line at the foot of the Grand Rapids, 21.57 feet above the surface of the water when the levels were taken.

The highest point of rock on the shoals at Little Rock was 12.97 feet below the base line; and in contemplating the proposed work, to give three and a half feet depth of water over the rock, the surface of the river must be raised to a point 9.47 feet above said base line, or, in even numbers, to nine feet six inches, which will be the point to which the weir or comb of the dam will be raised when it shall be built.

To determine the best plan of overcoming this descent in the river, several plans other than that of one dam and one lock, (the plan adopted)

suggested themselves. The first, if found practicable, was to introduce a feeder from White river on ground sufficiently elevated to lock, by means of a canal, into the Wabash above and below the rapids, and leave the bed of the river in its natural state, free for the great amount of trade passing in in flat and steamboats; another plan to make a canal from the upper part of the rapids, deep enough to be fed without throwing a dam across the Wabash, and in that manner leave the river free; a third one, to erect a dam at Hanging Rock to supply a canal to the foot of the rapids.

A slight examination sufficed to show the impracticability of the first and the inexpediency of the two last. The cost of construction was enough to decide the question: but if they could have been made for a much less sum, it is doubtful whether they should have been adopted. The steamboat trade of the Wabash is immensely valuable, and this cannot be well accommodated in a canal. The agitation of the waters produced by the motion of the steam vessels induces the necessity of paving the banks with stone, which injures the boats in their passage through them. Canals are obviously too narrow for the free operation of steamboats, whose motion in them is so constrained, and their progress so much impeded, that the utility of navigating canals by the agency of steam is a doubtful and unsettled question. The first of these canals would have been over seven miles in length, the latter over two.

These considerations were deemed sufficient to determine that the proposed works at the Grand Rapids should be by means of locks and dams across the Wabash, of the necessary height to give sufficient depth of water for boats to pass at all times the shoals and rapids in the first eleven miles above the mouth of White river; and whether one lock and one dam should be used for that purpose, or two, was the only question which remained undecided.

The height the waters require to be raised at the lower termination of the rapids, near White river, to give three and a half feet over the highest point of the river bed at Little Rock, in the lowest stages of water, is twelve feet. This height, on a good foundation, such as will be used, is not too great to render a dam unsafe; and as a single dam and lock are more economical and more convenient than to surmount the same rise of water by means of two, the use of one only should be preferred, provided the country is sufficiently elevated to sustain that height of water against the banks of the river.

In the event of building two dams, the site of the upper one would be at the Hanging Rock—the lower one near the foot of the Grand Rapids. The two sites are about two miles apart, and the water from the upper site to the extremity of the pool in the river above would be at the same elevation whether one or two dams should be erected. The only difference to the adjacent country in relation to the height of the water is for the distance between the two dams, which does not exceed two miles, and this difference in the height of the water would not be greater than three and a half feet; for, in order to give the necessary depth over the rocks for steamboats to enter the lock at Hanging Rock dam, a considerable portion of it would have to be submerged by the lower one. A dam at the foot of the rapids, to overcome the obstructions in the river to Hanging Rock, and to secure a sufficient depth of water to carry boats

safely into the second lock, would be seven and one-half feet in height above the surface of the river; and to overcome all the obstacles proposed to be remedied, less than ten and a half feet above the surface of the water where the dam will be built.

The greatest part of the descent of the Grand Rapids is within half a mile of the dam, so that the height to which the waters are raised above their natural bed is diminished four feet in that distance. The banks are high enough to confine the waters within them, except at the highest floods, during which the country is overflowed for miles in extent, with the exception of a few insulated points of sand-rock ridges, which appear like islands in the surrounding waters.

The difference, therefore, in the heigth to which the surface of the river will be raised by the use of one or of two dams is inconsiderable, not exceeding three and a half feet for two miles in distance; but to obviate all objections on that account, in the estimates, the cost of making guard-banks from the lower to the upper dam sites, on each side of the river, has been calculated and provided for. The difference in the height of the lock-gates and walls, on the plan of two dams, would have been three feet less than in one, provided the walls had been left at ten feet above the weirs or combs of the dams, and sometimes submerged in the waters of high floods; which, although avoided in the plan adopted, would not have rendered the works unsafe; with the banks raised to the proper height and well protected, and when the water was at that height, the dams would have made no obstruction to the passage of boats.

It is believed that all the advantages which can be claimed for two dams over one, are summed up in these items of the height of the water and the height of the lock-gates and walls—both are inconsiderable.

But the plan of one lock and one dam is preferable on account of producing less delay and injury to steamboats to pass one lock than to pass two; of less delay of landing flat boats and the hazard of being drawn over the dam in the descending trade of the river; of an increased amount of water-power, and greater economy in the cost of construction. It is usual to allow three feet for head and fall in building mills. On the plan of two dams, the difference in the surface of the water at Hanging Rock, above and below the dam, would have been only three feet, and therefore valueless for practical purposes. The available water-power at the lower site, six feet on the same plan; but with one dam and one lock, the available water power will be nine feet fall; therefore, if two dams and two locks could have been constructed for the same cost, the single plan ought to have been preferred. The cost of two, however, would have greatly exceeded the cost of erecting one. For comparison:

Plan of two dams and two locks—	
Cost of dam and lock at foot of Grand Rapids - -	$138,825 93
Cost of dam and lock and dam at Hanging Rock - -	132,782 60
	271,608 53
Plan of one dam and one lock.	
Cost of dam and lock near the foot of Grand Rapids -	166,928 55
Difference - - - - - - - -	104.679 98

The plan of one dam and lock was adopted, not only on account of the great difference of cost in its favor, but also of its greater utility. The height of the dam will be sufficient to give three and a half feet water over the highest points in the rock bed of the river at Little Rock shoals, without taking into consideration the influence the dam will have in backing the waters that distance, or for the height the water will stand on the comb of the dam; both of which will probably be equal to six inches, and give a depth of water of four feet over the highest rocks.

The lock will be 175 feet long and 38 feet wide in the chamber, and of the same dimensions as those used in the Kentucky rivers, which are now being improved. The lock is of sufficient capacity, with a rise of two and a half feet in the river, to pass boats of 200 tons burden—the size which includes the most numerous class which navigate the Ohio—and at all times to pass boats drawing three and a half feet water. The gates will be opened with capstans. The lock walls will be 236 feet in length, with piers of crib-work filled with stone and faced with plank, extending 180 feet in length above and below the lock, for protection walls.

The dam will be one thousand feet in length, built with cribs of timber, filled with stone and covered with six inch plank. The site is on the sand-rock bed of the river, and affords a good foundation for the dam. The rock is more firm and compact than that which is found above water in the vicinity. Care has been taken in the selection of the site, to place the dam sufficiently up the falls for the agitation of the water produced in passing the dam to subside on the rock-bed of the river, to prevent deep washing below—the formation of new sand bars to impede the navigation, and to prevent the structure from being weakened and undermined. The dam is thus placed some distance up the falls, and, as a necessary consequence, the rock, to some extent, has to be excavated below the lock. This selection of the site lessens the height the dam has to be built about one and a half feet, and adds greatly to its permanency. This rise on the rocktakes place above the point where the water will be discharged for hydraulic purposes, so that the fall secured by the erection of the dam is fully equal to 12 feet; 9 feet of which, according to the usual allowance of mill-wrights for head and fall races, will be available for machinery, with a supply of water greater than can be used for many years to come—sufficient at least to propel 300 run of 4½ feet mill-stones at seasons of the lowest stages of water, and will not be impeded by floods more than six weeks in a year.

The dam will have some slight influence in backing the waters of the river in medium floods, but this influence will be small. In higher stages of floods in which the water rises on the weir or comb of a dam to something like one-fifth part of its natural height, this influence of backing the water is altogether lost, so that a dam has no effect in increasing the rise of freshets after they swell to a certain height. In such cases an increase of velocity at the place the dam is situated is all the difference which can be perceived. The effect on smaller rises of a river must be very slight; for the water in the pool of a dam of miles in extent, in small floods, moves with a current that is scarcely perceptible, and the difference, consequently, of the elevation between the terminations of the pool must be small indeed.

The banks of the river are generally 19 or 20 feet above its bed; and at the height of ordinary floods, but with the exception of three places in the distance of 11 miles above the mouth of White river, in the highest rises of water, the whole valley bordering the Wabash is overflowed for miles in extent. The valley is very level and uniform in its surface, of a tough clayey soil which affords a tolerable guarantee against cut-offs, and the river from forming new channels.

From the lock and abutments on each side of the river, guard-banks can be cheaply constructed to high ground, which never overflows —a fortunate circumstance in the location which could not be found at any other place within many miles. Almost immediately above the site of the lock on the eastern bank of the river, a point of land, 20 feet above the highest floods, projects into the stream, and forms a harbor where boats may land safely without danger of being drawn over the dam.

This projection of high ground is not so abrupt as to make it difficult to pass, but at the same time it influences the current from the point to the bend of the river on the opposite side, and shields thereby the lock from drift and ice.

The bed of the Wabash for some distance—several miles above the Little Rock rapids—is deep and well adapted to become the reservoir of the sand which must, in the nature of things, be deposited at the head of the pool. Few places on the Wabash could be found so well adapted for the location of similar works, in which safety, convenience, and permanance are so well secured.

The lock-walls are designed to be built of the most durable materials, and in the best manner, as well as the abutments and dam. The greatest amount of trade on the Wabash obviously points to the necessity of doing, in the best manner, whatever is done, so that the work when put up will need little or no repairs, or be of doubtful utility when completed. The plan is very similar to those used in Kentucky on their public works. Care will be taken to have the walls and gates of such dimensions that they will be able to resist the pressure against them; and in the height of the gates, that they shall not exceed the limits in ordinary use for large locks, so that nothing shall be left to conjecture, or the hazard of an experiment.

The difficulty of procuring stone of a good quality, the quantity of materials to be collected at one point, the uncertainty of a proper stage of water for their transportation, and the necessity of having *all the materials* ready and prepared on the ground before a commencement of any part of the structures in the water can be made, induced the recommendation of letting out the delivery of the stone for the lock and abutment. This letting, for the materials, took place on the 22d instant, and contracts taken by two responsible companies for the delivery of 7,000 cubic yards of stone by the 1st of June next, at fair prices for the States. The contractors have already engaged with spirit upon the business of their contracts, and with an activity which promises well for their performance. The prices at which these contracts have been taken would seem to insure the completion of the whole work within the estimates made for its cost.

Thus far, building stone of a good quality has not been found nearer than Portersville, 77 miles by water, above the confluence of White river. There the quarries are fine for the massive work for which the materials

are required; none of a suitable quality have been found nearer to the site of the works, although diligent and laborious search has been made for that purpose.

The cost of the dam and lock is estimated at $166,928 55. The whole is carefully estimated, and put at such prices as is confidently believed will insure the completion of the work in the most substantial manner, without exceeding the estimates a single dollar.

It is expected that, according to contract, the stone will be delivered by the 1st of June next, and that the main contracts for building the lock and the dam, and abutments, may be let by the 16th of that month; so that the work may be completed by the first of November, 1839.

Ample provision has been made in the estimates for the use of the water-power, in the construction of culverts and canals for the conveyance and discharge of the waters.

So great a power for hydraulic purposes, created in the heart of an extensive wheat growing country, and adjacent to the beds of iron ore abounding in the valley of White river, cannot fail to insure to the States large profits. Its situation in a district of country where water privileges are extremely limited, will enhance its value, and being so great, (and within twelve hours' voyage of the Ohio) will give it such claims to the attention of the public as cannot, in the nature of things, fail to point it out as extremely well situated for any kind of manufacture in which water-power is essential, and induce it to be extensively improved.

In regard to the profits to be derived from the construction of the work, it will be sufficient to remark that, when completed, it will probably stand on more favorable ground, in relation to the revenues to be derived from it, than any other in either of the States. So soon as it shall be completed, a very moderate rate of tolls collected on the great trade of the Wabash will render it profitable in the matter of revenue.

But a very short time can elapse before the rents from the water-power alone will pay the interest on the cost of construction, and keep up the necessary repairs and attendance. Leases for water-power in Indiana rent for $150 per annum for privilege for propelling one run of four and one half feet mill-stones, and are readily sought for at these prices.

The eligibility of this water-power for the manufacture of iron and nails, of paper, cotton, lumber, and flour, cannot fail of making it in a short time the source of large revenue to the States. The benefits of these works to the country can hardly be appreciated. Great confidence is felt that to the present navigable portion of the year on the Wabash, it will add at least three months to that time, for the upper part of it; and that when the obstacles to the navigation of this section of the river shall be removed, there will be more inducements for the business of steamboats in the summer season; and that but a very short time in each year will be found, in which light draft boats, suited to the commerce, will not make their regular trips from the upper country to its mouth. Nor will the benefits cease with the extension of the navigation of the river, and the rents and tolls which will be received—the introduction of property, the investment of capital to a great amount in manufactures, will swell the revenues of the States, and add greatly to the aggregate of their wealth, and to the prosperity and convenience of their people.

The disbursements made in locating the work, examinations for stone, purchase of instruments, tools, &c., is $1,464 68; the one-half of which, or the sum of $732 34, was paid out of the money furnished by each Commissioner of the respective States, as per account, with vouchers rendered with the plans and estimates in detail; which are respectfully submitted.

A. BURR,
Principal Engineer Wabash river.

Report of Edward Smith, Principal Engineer.

RAILROAD OFFICE,
Mount Carmel, March 7, 1838.

To Gen. M. K. ALEXANDER,
Commissioner of the Board of Public Works.

SIR: In obedience to your instructions, so much of the eastern division of the Alton and Mount Carmel railroad as extends from Mount Carmel to Albion, has been definitely located, and prepared for contract, and I now have the honor to report the following results in relation thereto.

After the receipt of the order of the Board of Public Works, directing the above named portion of this road to be put under contract, accompanied by your instructions to have it ready for letting by the eight of March ensuing, the locating party, which at that time were engaged in preparing the western division of the same road for contract, were removed to Mount Carmel. This party was under the charge of Mr. Terril, and with the exception of Mr. Scheel, who remained at the western office, and whose place was supplied by Mr. Seymour, have located the work on this division. It required some two weeks after their arrival at Mount Carmel to complete the estimates and drawings of the western end of the line, before commencing field operations on this end. These unavoidable causes of delay postponed the commencement of the work here until in the month of January.

The *experimental* lines on the eastern division of Alton and Mount Carmel railroad were made in May and June last. under the then existing order of the Board of Public Works restricting the grades to 30 feet ascent and descent in the mile, with the exception of that portion of the line which crosses the Albion ridge, which, by special instruction, was extended to 40 feet. These preliminary surveys, therefore, were of little aid in effecting the recent location which has been made, with a view of benefiting by the recent order of the Board, in reference to extending the grades at the option of the Commissioners in charge of each respective work. The present location occupies a route which was impracticable, within any reasonable cost, at a grade of 30 feet to the mile, and hence, entire new surveys and examinations were instituted on a considerable portion of the route.

These circumstances, combined with the extreme inclemency of the weather during the month of February, have operated to retard the progress of the work beyond what was anticipated by me when I engaged to have the work ready for contract by the 8th of March. I however have the pleasure to state that, notwithstanding the difficulties and privations which the party necessarily encountered in their field operations, by an assiduity and praise-worthy attention to their duties, all the necessary examinations have been made by them to enable me to present you at this time what I deem to be the most judicious definite location,

on almost the whole line of work, together with a minute estimate of the probable amount and value of the work on each respective section into which the line has been divided. There are two or three points on the route, at which are presented difficulties which require some further examination, to enable me to decide definitely on the precise location to recommend to you; but the plans and profiles of the line at those points indicate the vicinity and character of the work sufficiently explicit to enable contractors to bid understandingly for the execution of it.

Without anticipating further, I will proceed with the description of the line of work, and of the country over which it passes.

The location commences in Mount Carmel, at the bank of the Great Wabash river, on the town commons, and in a line with the centre of Mulberry street; and the ordinary high water-mark of the river is assumed as the base of the vertical survey. From the point of commencement, the line is carried over the commons to the intersection of Front street, at the foot of the bluff upon which the town is situated, and from thence up the centre of Mulberry street. This street occupies a ravine which presents a very favorable and cheap location to ascend from the river bottom to the table land. Near the intersection of Fifth street, the line attains the lowest depression in the hill, at an elevation of 48.4 feet above the base, 3,800 feet from the river bank. Here a curve of ——— feet radius is resorted to, in order to throw the line into the centre of Sixth street, which is attained near the intersection of Market street, and is pursued to the western limits of Sixth street. By this arrangement, the most economical location is adopted, and at the same time the injury done to private property is inconsiderable in amount. The corporation having granted the right of way, for the rail-road, through the commons, streets, and alleys of the town, and the resident proprietors having generally acted with the same liberality, the location through the town plat is effected in a manner highly satisfactory for the interests of the State.

After leaving the western boundary of the town, the line is curved gently to the west, and runs, on or near the line of sections, to the crossing of Great-house creek, at the distance of about two miles from the river bank. At the distance of three miles and 24 chains, the summit of the dividing ridge between Great-house and Coffee creeks is attained, at an elevation of 85.6 feet. This ridge forms one of the principal obstructions on the line; and which, with two others of the same description, will render it necessary for the Commissioners at the letting to decide a question of expediency and utility between a sinuous and lengthened line of road, on a low grade, and a direct and straight line, on grades, at these three points, exceeding fifty feet to the mile. By the present location, this ridge is overcome by straight planes; the grade of the plane on the eastern slope being 53 feet, and the first half from the summit of the western plane being on a grade of 34 feet, and the other half, of 53 feet to the mile. The length of the eastern plane is 6,800 feet, and that of the western, 4,900 feet. In order however to effect this design, a cut of 28 feet in depth on the extreme summit of the ridge, and averaging 13.36 feet in depth, for a distance of 1,800 feet, has to be encountered. It is supposed that rock may be met with in this cut, but the shortness of the time allowed for preparing the work for contract, and my indispensable engagements in other parts of the district during a part of the winter, have prevented me from instituting examinations, which otherwise would have been made in reference to the matter, both at this and the Albion ridge, to be described in a subsequent part of this report. If rock should occur at any considerable elevation in the cuts, (which fact will be fully determined before the work shall be commenced,) it is supposed that the cost of the excavation will not be materially influenced thereby, as the aggregate amount of material

to be removed will be diminished, and also, the rock may be of value to the State for masonry on the line.

After passing this ridge, the line assumes the valley of Coffee creek, and passes over a gently undulating country, until it reaches the dividing ridge between the waters of Coffee creek and Bon Pas river, on Mr. Robert Rigg's plantation. On leaving the foot of the ridge between Great-house and Coffee creeks, near Mr. Samuel Rigg's dwelling house, the line is necessarily subjected to a slight curve, and thrown south of a direct line to Albion, in order to avoid a very elevated section of the ridge, and assume a low gap near Rigg's house. The elevation is overcome by a plane of 2,200 feet in length, and on a grade of 74.4 feet to the mile on the easterly slope, and on the westerly slope by a plane 2,400 feet long, and grade of 49.10 feet to the mile. The depth of the cut on the extreme summit is 13.64 feet, and averages 6.40 in depth for a distance of 1,700 feet It is worthy of particular remark, that the grades on the eastern side of the ridge can be materially diminished and brought within moderate limits, by resorting to a curved line, conforming to the southern escarpment of the hill on the south of Mr. Rigg's dwelling house, by which means the plane can be commenced at a much greater distance from the summit. Immediately after passing this ridge, the line assumes the wide and level valley of the Bon Pas river, and passes for the most part through or in the immediate vicinity of a finely timbered country. At the distance of 12 miles and 55 chains from the Wabash, the Bon Pas is intersected, and passed at a favorable point for the construction of the bridge, and on a quarter section of land owned by the State. The country west of the river still continues comparatively level, but is more open and interspersed with farms and prairies. This description of country continues to within about one and one-quarter mile of the summit of the Albion ridge, or about sixteen miles from Mount Carmel. Here commences one of the principal obstructions in the vertical line of the road which occur on the whole line between the Wabash and Mississippi rivers.

It is not so much to the height of the ridge that the obstruction is to be attributed, as to its relative elevation to the level country which approaches it within so short a distance of its summit. It might be supposed, on cursory reflection, that as the line receded from the Wabash river in a westerly direction, the *general* level of the country would become more elevated; yet the surveys have developed the fact, that the bed of the Bon Pas, at the point of crossing, is about as low as that of the Wabash at Mount Carmel; and that the country near the foot of the Albion ridge is very little elevated above high water mark of the latter stream at the above named point. This fact however is easily explained, when it is considered that the line of survey pursues the general direction of the valley of the Wabash, crossing its small tributaries at right angles, and consequently partakes of the general inclination.

The elevation of the lowest depression in the Albion ridge, by which the line can be carried through any part of the town plat, ranges from 126 to 128 feet above the base line; and from the nature of the country, any plane which may be assumed to overcome 100 feet of this elevation, and carry the line through the town, must be commenced within a fraction over one mile from the summit. If the plane should be straight, the grade cannot be much under 90 feet to the mile, without encountering work of a very expensive character; and in proportion as the grade is reduced, the line must either be curved and the distance prolonged, or the cuttings and embankments increased. In the latter case, and perhaps in both, the cost of the work will be materially augmented.

The plan and profiles herewith submitted exhibit an assumed line over the ridge, and onward to the end of the 18th section; more for the purpose of indicating the character and amount of work on these sections than of determining the precise location of the line; and a notice to this effect will be appended to the description

of the work exhibited at the lettings. Any location that may be deemed more judicious, on a critical revision of the line, will not change materially, if any, the character, or perhaps the amount of work, as shown by the present description of it, and therefore proposals can be received for its execution, without impropriety in any point of view. The examinations which have been made on this portion of the line, both at the time of executing the preliminary surveys, and during the present winter, have been elaborate and extensive; and no doubts are entertained of the practicability of overcoming this obstruction, with a line as favorable in regard to cost and effective usefulness as that now presented; and strong hopes are indulged that the whole can be materially improved.

I used my utmost endeavors to despatch the business at the lettings on the western division of the road, and return to this work as speedily as possible, in order to effect a definite location of the work on the 17th and 18th sections, which would be satisfactory to my own mind, previous to the lettings. On my arrival, I found it necessary to devote my whole time in assisting to make up the results of the field operations, which had already been had, in order to be ready for the lettings; and was therefore precluded from carrying this design into effect. I propose, however, to attend to this matter specially, as soon as your advice and instructions in relation to it can be obtained, and without any delay to the contractors, should the section be let.

In addition to what has already been said in reference to the grades on the line, it may be proper to remark that steep planes occur but at four points, and in every instance, their greater inclination and length occur on the eastern slopes, and in the direction in which a large preponderance of the heavy transportation may reasonably be expected; that the planes are generally on straight lines; and that they are susceptible of improvement by reduction, whenever the amount of trade upon the road or other circumstances may render such a change economical or judicious.

It should also be borne in mind, that there is every probability of this work, at no distant day, forming a link in a continuous line between Louisville, on the Ohio, and two great and rival commercial emporiums on the Mississippi river; and that it will come into direct competition, for the travel and light transportation with the steamboat navigation between those important points, in the great valley. In view of these facts, there can be no question, but that the interests of the State would be as well consulted in projecting this design, to provide for the most speedy and advantageous conveyance of passengers, as by adopting the road exclusively to heavy transportation. And the one object can be secured, without materially affecting the other, by avoiding as far as practicable all increase of distance and curvatures on the line.

Aware of your opinion on this subject, I deem it supererogatory, on my part, to urge the propriety of adopting a straight and direct location at the expense of a few rather elevated grades. The recent experiments on the use of steam engines on rail-ways tend fully to develope the fact that these valuable machines possess a much greater inherent power and capacity for operating to advantage on inclined roads than was imagined, or at least practicably applied, some years ago; and therefore some of the most important lines of railroads in the United States have recently been projected, by engineers of unquestionable scientific and practical knowledge in their professions, predicated on the use of mechanical motive power, on grades greatly exceeding fifty feet to the

mile. In view then of the discoveries which are almost daily making, in regard to the increased capacity and advantage of steam motive power on roads; and also, of the propriety of applying, to the construction of our public works in Illinois, that rigid economy which prudence and custom dictate in all private improvements, in a new country, there can exist but little danger of falling into error, by avoiding, as far as practicable, all expenditures of doubtful necessity and utility in the construction of our roads.

The accompanying tables of gradients and of curves, exhibit a condensed view of these peculiarities, in the route selected. By reference to these tables, and to the map herewith submitted, it will be perceived that the route of the road between Mount Carmel and Albion is very direct, and for the most part on straight lines. But few curves occur, and with the exception of the one within the town plat of Mount Carmel, they are all on very extended radii.

As the whole drainage of the country is intersected by the line, nearly at right angles, the undulations in the vertical line of the road are consequently frequent; but with the exception of the points above alluded to in detail, these fluctuations in the line are too minute and inconsiderable to affect injuriously the usefulness of the road when in operation.

The mechanical structures on the line are few and inconsiderable; the bridge over the Bon Pas being the most important. From the difficulty at present apprehended in procuring suitable stone, near the route, for bridge abutments, it is proposed to adopt the simplest and cheapest plans, in all cases, for these structures, and to support them with wooden tressles. As timber of the first quality for these purposes abounds in the immediate vicinity of the respective works, a judicious economy seems to require the use of it, in the absence of suitable rock, until future examinations shall have developed the existence of better materials; when its transportation, even from a considerable distance, can be effected on the railway at a small expense to the State. The same course is proposed to be adopted in relation to the smaller water ways on the line, where the same difficulty is apprehended in regard to procuring rock; with the understanding, however, that if the excavations in the line should discover suitable rock for their construction, it will be applied in lieu of the timber drains.

The facilities for procuring materials on the route for the construction of the works, with the exception of building rock, are highly favorable. The country through which the road passes, and especially the valley of Bon Pas, is for the most part well timbered; and the Wabash, White river and Patoka, all uniting immediately at the debouchment of the road on the Wabash present facilities for procuring supplies of timber for the construction of the railway, which perhaps are not surpassed, if equalled, at any other point in the State.

The total length of the present located line is eighteen miles; which has been sub-divided into eighteen sections, of nearly equal extent. A tabular statement or synopsis of the probable amount and description of the different items of work on each respective section, together with minute estimates of the probable cost of the work, is herewith submitted. The subjoined estimates embrace, also, the probable cost of the

timber, and workmanship of the superstructure of the railway, and of completing the whole work for the reception of the cars.

Land for the river depot at Mount Carmel can be obtained on the town commons, without any present cost to the State. Liberal offers have also been made by citizens of Albion for furnishing land for a depot at that place; and the feelings manifested by the community, generally, on the route of the work, fully warrant the belief that little or no difficulty will arise in regard to obtaining the right of way for the road as well as sites for depots.

The accompanying drawings and specifications illustrative of the survey, location, and construction of the road, together with this report, are all most respectfully submitted by

Your obedient servant,

EDWARD SMITH,

Principal Engineer of Southern District.

An estimate of the probable cost of work proposed to be executed in the construction of the first eighteen sections of the eastern division of the Alton and Mount Carmel railroad, extending from Mount Carmel to about three-fourths of a mile southwest of Albion.

Section No. 1, 6,500 feet in length, commencing on the bank of the Wabash river, in Mount Carmel, passing up Mulberry street, curves into Sixth street, and extends to station 65, being at the west end of the town plat of Mount Carmel.

6,667 cubic yards of excavation, at 14 cents per yard -	$933 38
7,758 cubic yards of embankment, at 18 cents per yard	1,396 44
2 brick drains, 30 perches, at $5 per perch -	150 00
9 street crossings, at $25 - - - - -	225 00
86 rods fencing, at 50 cents per rod - - -	43 00
	$2,747 82

Section No. 2, 4,500 feet in length, commencing at the west end of the town plat of Mount Carmel, and extending to the west bank of Greathouse creek.

5.50 acres of clearing, at $25 - - - - -	137 50
1.00 acre of grubbing, at $125 - - - -	125 00
50 cubic yards of excavation, at 16 cents - -	8 00
11,047 cubic yards of embankment, at 17 cents - -	1,877 99
200 lineal ft. bridging over Greathouse creek, at $3 per ft.	600 00
1 brick drain, 19 perches, at $5 per perch - -	95 00
1 wood drain, 400 feet of timber measure, at 8 cents	32 00
1 road crossing, at $25 - - - - -	25 00
98 rods fencing, at 50 cents - - - - -	49 00
	$2,949 49

SECTION No. 3, 6,400 feet in length, commences at Greathouse creek, and extends to the summit at Key's Ridge.

8.75 acres of clearing, at $30	$262 50
32,156 cubic yards of excavation, at 16 cents	5,144 96
1,000 cubic yards of sand stone, at 80 cents	800 00
11,771 cubic yards embankment, at 16 cents	1,883 36
1 brick drain, 50 perches, at $5 25 per perch	262 50
376 rods of fencing	150 00
2 road crossings, at $20	40 00
	8,543 32

SECTION No. 4, 5,400 feet in length, commences at the summit, (Key's Ridge,) and extends to near Samuel Rigg's plantation.

9.80 acres clearing, at $25	245 00
1.00 acre grubbing, at $125	125 00
15,124 cubic yards excavation, at 16 cents	2,419 84
1,000 cubic yards sand-stone, at 80 cents	800 00
9,239 cubic yards embankment, at 16 cents	1,478 24
1 brick drain, 50 perches, at $5 25	262 50
1 wood drain, 810 feet of timber, at 9 cents per foot	72 90
1 public road crossing	30 00
230 rods fencing, at 50 cents	115 00
	$5,548 48

SECTION No. 5, 4,600 feet in length, commences near Samuel Rigg's, and extends to near the Coffee creek.

7.80 acres clearing, at $25 per acre	$195 00
1.10 acres grubbing, at $125 per acre	137 50
8,156 cubic yards excavation, at 15 cents per yard	1,223 40
5,208 cubic yards embankment, at 16 cents per yard	833 28
Bridging 200 feet over slough, at $2 50	500 00
1 stone drain, 18 perches, at $3 50 per perch	63 00
1 drain of wood, 510 feet of timber, at 9 cents	45 90
Public road crossing	30 00
	3,028 08

SECTION No. 6, 4,300 feet in length, commences on the east side of Coffee creek, (in the Coffee flats) and extends to a short distance beyond Christian Urnot's plantation.

8.25 acres clearing, at $30 per acre	$247 50
.75 acre grubbing, at 125	93 75
.30 acre prairie sod, at 20 dollars	6 00
1,390 cubic yards excavation, at 16 cents per yard	222 40
4,544 cubic yards embankment, at 18 cents per yard	817 92
Bridge 200 feet, over Coffee creek, at $2 50	500 00
1 wooden drain, 420 feet of timber, at 8 cents per foot	33 60
	1,921 17

SECTION No. 7, 5,300 feet in length commences near Christian Urnot's, and extends to the edge of a small prairie near George Rice's house.

11.50 acres clearing, at $25 per acre - - -	$287 50
1.10 acres grubbing, at $120 per acre - - -	132 00
.20 acre prairie sod, at $20 per acre - - -	4 00
1,392 cubic yards excavation, at 14 cents per yard -	194 88
6,373 cubic yards embankment, at 17 cents per yard -	1,083 41
Bridge, 40 feet, at $2 50 - - - - -	100 00
1 wooden drain, 300 feet of timber, at 8 cents per foot	24 00
	1,825 79

SECTION No. 8, 6,000 feet in length, commences near George Rice's house, and extends to a summit northwest of Robert Rigg's.

2.30 acres clearing, at $25 per acre - - -	$57 50
.30 acre grubbing, at $130 per acre - - -	39 00
5,225 cubic yards of excavation, at 14 cents per yard -	731 50
14,215 cubic yards of embankment, at 17 cents per yard -	2,416 55
2 wooden drains, 1,200 feet of timber, at 9 cents -	108 00
173 rods of fence, at 50 cents (on Rice's) - - -	86 50
206 rods of fence, at 50 cents (on Riggs') - -	103 00
	3,542 05

SECTION No. 9, 4,600 feet in length, commences at the summit near Robert Riggs', and continues down to near the bottom land on Bon Pas flats.

10.50 acres clearing, at $25 per acre - - -	$262 50
.70 acre grubbing, at $125 per acre - - -	87 50
7,198 cubic yards of excavation, at 15 cents per yard -	1,079 70
12,811 cubic yards of embankment, at 16 cents per yard -	2,049 76
1 wooden drain, 690 feet of timber, at 8 cents -	55 20
	3,534 66

SECTION No. 10, 5,400 feet long, commences near the Bon Pas flats, and continues to near the White-oak ridge in the direction of the Bon Pas river.

12.50 acres of clearing, at $30 per acre - - -	375 00
.80 acres of grubbing, at 125 dollars per acre - -	100 00
4,710 cubic yards of excavation, at 14 cents per yard -	659 40
8,327 cubic yards of embankment, at 16 cents per yard -	1,332 32
2 wooden drains, 1,100 feet of timber, at 8 cents per ft.	88 00
	2,554 72

Section No. 11, 5,200 feet in length, continues on the bottom land in the direction of the Bon Pas river.

12.50 acres of clearing, at 25 dollars per acre - -	$312 50
.60 acre of grubbing, at 150 dollars per acre - -	90 00
2,949 cubic yards of excavation, at 14 cents per yard -	412 86
4,713 cubic yards of embankment, at 17 cents per yard -	801 21
Bridging over bottom lands 50 ft., at 2 dolls. per ft.	100 00
2 wooden drains, 910 feet of timber, at 7 cents per foot.	63 70
	1,780 27

Section No. 12, 5,300 feet in length, continues in the direction of the Bon Pas, and crosses a wet prairie.

5.75 acres clearing, at 30 dollars per acre - -	$172 50
.30 acre grubbing, at 130 dollars per acre - -	39 00
1.00 acre prairie sod, at 20 dollars per acre - -	20 00
3,564 cubic yards of embankment, at 16 cents per yard -	570 24
Bridge, 100 feet, over Crackle's creek, at $2 25 cents	225 00
Road crossing - - - - -	20 00
60 rods of fence, at 50 cents per rod - -	30 00
	1,076 74

Section No. 13, 5,300 feet in length, commences on the east side of the Bon Pas river and crosses the same, passing through the margin of prairie and timber.

9.20 acres of clearing, at 30 dollars per acre - -	276 00
1.30 acres grubbing, at 130 dollars per acre - -	196 00
1,358 cubic yards of excavation, at 15 cents per yard -	203 70
993 cubic yards of embankment, at 15 cents yer yard -	148 95
Bridge, 120 feet, in three spans, at 8 dollars - -	960 00
Bridge, 140 feet, double track, truss work, (see drawing) over Bon Pas, at 5 dollars - - -	700 00
1 wooden drain, 510 feet of timber, at 7 cents - -	35 70
2 road crossings, at 25 dollars - - - -	50 00
48 rods of fencing, at 50 cents per rod - - -	24 00
	2,567 35

Section 14, 5,300 feet in length, commences half a mile west of Bon Pas river, and continues to the bank of Stillhouse creek, passes through some cleared land owned by Hall, Buckner, and Hassel.

2.50 acres of clearing, at 25 dollars per acre - -	62 50
.30 acres of grubbing, at 100 dollars per acre - -	30 00
7,697 cubic yards of embankment, at 18 cents per yard -	1,385 46
2 stone drains, 20 perches, at 3 dollars 50 cts. per perch	70 00
1 road crossing - - - - -	30 00
231 rods of fencing, at 60 cents - - - -	138 60
	1,716,56

Section No. 15, 5,700 feet in length, commences in the east and south bank of Still-house creek, crosses the same in four different places in the direction of Albion.

12.20 acres of clearing, at 25 dollars per acre	$305 00
2.20 acres of grubbing, at 130 dollars per acre	286 00
.50 acre of prairie sod, at 20 dollars per acre	10 00
1,292 cubic yards of excavation, at 16 cents per yard	206 72
2,639 cubic yards of embankment, at 18 cents per yard	475 02
Bridging 300 feet in different locations, at $2 25	675 00
1 stone drain 16 perches, at $3 50 per perch	56 00
	2,013 74

Section No. 16, 5,300 feet in length, commences in edge of prairie near where the Shawneetown and Lawrenceville road crosses the same—passes through Wm. Bushet's orchard, and extends to the broken ground near the Albion summit.

1.80 acres of clearing, at 25 dollars per acre	45 00
.30 acre of grubbing, at 120 dollars per acre	36 00
1 acre prairie sod	20 00
3,839 cubic yards of excavation, at 15 cents per yard	575 85
6,089 cubic yards of embankment, at 16 cents per yard	974 24
3 stone drains, 30 perches, at $3 50 per perch	105 00
2 public road crossings, at 30 dollars	60 00
1 private road crossing	20 00
98 rods of fencing, at 75 cents	73 50
	1,909 59

Section No. 17, 6,200 feet in length, commences in the broken ground east of Albion summit, passes the same and continues to Albion.

9.20 acres of clearing, at 30 dollars per acre	276 00
.30 acre of grubbing, at $125	37 50
21,069 cubic yards of excavation, at 16 cents per yard	3,371 04
1,000 cubic yards sand stone, at 80 cents	800 00
37,498 cubic yards of embankment, at 16 cents per yard	5,999 68
Bridge 40 feet over branch of Still-house creek, at $2 50	100 00
2 stone drains, 38 perches, $3 50 per perch	133 00
2 road crossings, at 30 dollars	60 00
148 rods of fence, at 75 cents	111 00
	10,888 22

SECTION No. 18, 4,100 feet in length, commences in the town plat of Albion and extends in a southwesterly direction about three-fourths of a mile, country broken by small ridges.

6.90 acres clearing, at 25 dollars - - -	$172 50
.50 acre grubbing, at 125 dollars - - -	62 50
6,889 cubic yards of excavation, at 15 cents per yard -	1,033 35
6,172 cubic yards of embankment, at 15 cents per yard	925 80
6 stone drains, 59 perches, at $3 50 - -	206 50
5 street and road crossings, at 30 dollars - -	150 00
148 rods of fence, at 60 cents - - -	88 80
	2,639 45

RECAPITULATION OF THE COST OF ROAD-BED AND BRIDGING.

Section number 1 - - - - -	$2,747 82
Section number 2 - - - - -	2,949 49
Section number 3 - - - - -	8,543 32
Section number 4 - - - - -	5,548 48
Section number 5 - - - - -	3,028 08
Section number 6 - - - - -	1,921 17
Section number 7 - - - - -	1,825 79
Section number 8 - - - - -	3,542 05
Section number 9 - - - - -	3,534 66
Section number 10 - - - - -	2,554 72
Section number 11 - - - - -	1,780 27
Section number 12 - - - - -	1,076 74
Section number 13 - - - - -	2,567 35
Section number 14 - - - - -	1,716 56
Section number 15 - - - - -	2,013 74
Section number 16 - - - - -	1,909 59
Section number 17 - - - - -	10,888 22
Section number 18 - - - - -	2,639 45
Total - - - - - -	$60,788 50

Estimate of the probable cost of the superstructure of railway for one mile of single track.

1.	11,500 lineal feet foundation sills, at 4 cents		$460 00	
2.	1,510 cross sills - - - 25 -		377 50	
3.	30,800 feet board measure rails $18 per M.		554 40	
4.	3,020 wedges - - - 3 cents		90 60	
	Value of timber delivered on line,			$1,482 50
5.	Mechanical work per mile - - - -		900 00	
	Horse path - - - - - -		200 00	
				1,100 00
	Iron, spikes, &c.			
	22¼ tons of iron delivered, $90 per ton -		2,002 50	
	Spikes, lap-plates, &c. - - -		150 00	
				2,152 50
Total cost of single track per mile - - -				4,735 00
Add for turn-outs, side-tracks, crossings, &c, per mile, ten per cent. - - - - -				473 50
	Total amount per mile - -			$5,208 50

Specifications of the manner of executing the work, &c., on the eastern division of the Alton and Mt. Carmel railroad, extending from Mt. Carmel to Albion, which work is advertised to be let on the 8th day of March, 1838, at the Railroad office in Mt. Carmel.

Clearing and Grubbing.

Preparatory to commencing the graduation of the road, a way-space, extending fifty feet on each side of the central line, will be cleared off and grubbed in the following manner, viz: In slight excavation, and also where the embankment shall be less than two feet in height, the space to be occupied by them will be neatly grubbed of all trees, saplings, bushes, stumps, and roots; and where the embankment shall be two feet high and upwards, such space will be neatly cleared by cutting off, completely even with the natural surface of the earth, all trees, saplings, bushes, stumps, and other vegetable growth thereon; and, in both cases, the whole of such space to be occupied by the road-way will be neatly cleared off, and all the vegetable and perishable substances removed before commencing the embankment thereon. The residue of the space of 100 feet wide, not occupied by the road-way, will be cleared off by felling all trees, saplings, and bushes standing thereon; and the trunks and large limbs of all timber to be trimmed and left on the ground for

the use of the State; and rolled, piled, or otherwise disposed of on the said clearing, so as to admit of convenient passage of wagons along both sides of the railroad; and in such manner, also, as not to obstruct any travelled road or bridge, or to interfere with any side ditch or drain. The brush, trash, and logs from such clearing are to be burnt by the contractor. Where the line passes through natural and newly cultivated prairie, the prairie sod will be excavated and removed from the space to be occupied by embankments, in all cases where the height of embankment is less than two feet.

Excavations and Embankments.

The spaces to be occupied by the road-way having been first cleared and grubbed, in the manner specified under the head of clearing and grubbing, the graduation will be made according to the plans, profiles and cross sections thereof, exhibited at the lettings, subject to all changes and alterations which may be deemed advisable by the acting Commissioner, or principal engineer on the work directing its progress.

The embankments will be constructed of pure earth, sand, gravel, or rock, and no vegetable or perishable substance will be admitted into them. The embankments contiguous to excavations will be formed of the materials taken from such excavations; and if the distance of conveying such materials does not exceed 200 feet, the embankment so formed will be considered as paid for in the excavation. But in all cases where embankments are formed with materials taken from side ditches, or other points within the line of road-way; and where the materials from excavations within the line of road-way are necessarily removed a greater distance than 200 feet, the embankment will be paid for as such Under the term, "embankment," is included the filling in of all bridges and other abutments, and covering of drains; which jobs shall be done at such specified times and in such manner as the engineer or superintendent on the work shall direct. Side ditches and side drains will be cut at such points and positions, and of such slopes and dimensions, as shall be directed by the engineer in charge of the work; and together with the excavations of abutments and drain-pits, will be paid for as excavation at the contract price, excepting where the materials from such ditches, drains, and pits, are needed to form embankments within 100 feet from the place of excavating the same; in which case this work will be paid in embankment only.

Great care will be required of the contractors to make excavations coincide as near as may be with the line of grade, and in no case to fall below it; and the embankments will be constructed of such extra height above the line of grade as the engineer may deem necessary, from the nature of the material, to allow for shrinkage; and such additional amount of embankment will be paid for at the contract price.

Any deficiency of materials for embankments, not supplied from the necessary side ditches and drains, and contiguous excavations in the line of road-way, will be procured from such convenient point in the vicinity of the line as the acting Commissioner or engineer may direct. And the contractor will be required to use special care in removing the same, to disfigure or injure, as little as may be practicable, the lot, field, or piece

of ground from which such materials are removed. Any redundance of materials from excavation not required for embankment within 200 feet from the point of excavating it, or not otherwise used by the contractors for embankment beyond 200 feet, shall be disposed of in such manner as the engineer may direct for the widening of embankments within 200 feet of the point of excavating such materials, or placing it as a spoil within 100 feet of the line of road-way, in such form and position as will be of as little injury to the work, or to private property, as may be practicable; but no extra pay will be allowed for thus disposing of such material. Any rock suitable for building, which may be taken from the excavation, and not needed on the section for masonry, will be considered as property of the State.

Masonry.

The abutments and piers of bridges, and the culverts and drains, will be built of stone, where procurable within a reasonable distance of the work; and the bids on this work will be predicated on the stone being procured within one mile. If transported a greater distance than one mile, the expense of such extra transportation to be paid for at the estimate of the principal engineer. The stone used in the work will be of good size, to be approved of by the principal engineer on the work, and will be laid in coursed rubble-work, well bedded, and break-joints with preceding courses. Mortar will be used for the masonry, unless otherwise directed by the principal engineer, and will be made of the best quality of unslacked lime and sharp clean sand, to be combined in such proportions as the engineer or superintendent on the work shall direct. Where suitable stone cannot be procured, well burnt brick will be substituted, if directed and approved of by the principal engineer. The walls will be laid in the most substantial and workmanlike manner, and pointed, and such portions grouted as the engineers or superintendent may direct. No materials will be used on the work until inspected and approved of by the principal engineer, or such other person as he may specially direct to inspect the same.

Wooden Drains.

The drawings of these structures, exhibited at the letting, will indicate the principles which will govern their construction; but they will necessarily vary in length and size with local circumstances. They will be built with sound white-oak, post-oak, or of timber of equal durability, to be approved of by the principal engineer on the work. The proposals for the wooden drains will be made by the foot, (timber measure) of the timber used therein, and the price to include both timber and workmanship.

Viaducts, Bridges, and Truss-work Bridges.

All the viaducts, bridges, and truss work will be constructed in conformity to the plans, elevations, and descriptions thereof, exhibited at the

lettings, subject, however, to all changes and alterations therein which the acting Commissioner or principal engineer for the time being may deem advisable to make subsequent to making the contract. All timber and plank to be used in these structures, either for the tressle supports or superstructure, will be of sound white-oak, or timber of equal strength and durability, to be entirely free from decay, crack, wind-shakes, knots, or other defects calculated to impair its strength or durability; and in conformity to a recent order of the Board of Public Works, must pass the inspection of, and be approved by, the principal engineer for the time being, before being used in the work.

All timber designed for the wooden structure on the line must be either sawed or smoothly and neatly counter-hewn, brought to fair angles, and free from wave edges, excepting the mud sills, or other parts of the work embeded in the ground. The mechanical work must be executed in a good substantial and workmanlike manner; the mortices, tenons, shoulders and abutments must be dressed neatly and smoothly, and in such manner as in every case to give full, fair and uniform bearings at all joinings in the work. The tenons, abutments and other joinings of the frames will be primed and put together with white lead ground in oil, and such portions of the bridges as are marked with the letter P, in the drawings thereof, will be primed and painted with two good coats of oil, and white or read lead, at such time after their construction as shall be directed by the principal engineer on the work.

The iron to be used in the viaducts and bridges will, in like manner, be inspected and approved by the principal engineer; and the contractors will be required to oil it, or take other means to protect it from rusting, before being used in the work, and upon using it in the work, to cause such parts of it as are exposed to the weather to be painted immediately.

Timber for the Superstructure of the Railway.

1. *Foundation sills and joining blocks*, (requiring 11,500 lineal feet to the mile.)—These sills will be of sound white-oak, burr-oak, post-oak, black walnut, sassafras, locust or catalpa. The stocks will not be less than nine inches diameter at the smallest end, and of any length over fourteen feet. The sills will be flattened by hewing them, on two opposite sides, to a uniform thickness from end to end, having one of the faces fair and smooth; the other may be left in the rough, as it is scored off, but each hewn face shall not be less than six inches wide at any point.

In lieu of the above described foundation sills, sound white-oak plank, two and a half inches thick and seven inches wide, may be used, and proposals will also be received for such plank, requiring 16,500 feet board, or 9,000 feet, timber measure, for each mile of road.

2. *Cross sills*, (requiring 1,510 to the mile.)—The cross sills will be one foot eight inches long, clear of carfs, and not less than ten inches diameter at the smallest end. If split out of large trees, they will be of a size that will square eight inches, and at least six and a half inches of which must be heart-wood. In all cases they will be flattened on one side to a true face from end to end, of not less than seven inches wide at

the narrowest place, and parallel with the upper or opposite side of the sill. These sills will be of white, burr, or post-oak, heart black-walnut, sassafras, locust, and catalpa; or other wood of equal strength and durability which the Commissioner or principal engineer may accept of. Separate and distinct proposals will be received for furnishing catalpa cross sills, to be delivered at the river depot at Mount Carmel, or at any other point or points on the line.

3. *Rails*, (requiring 10,560 lineal feet, or 30,200 feet board measure, or 10,560 feet timber measure, for one mile.)—These rails will be of sound white-oak, burr-oak, post-oak, heart black walnut, heart locust, or such timber of equal durability and strength as the Commissioner or principal engineer may think advisable to accept of. The size of the rails if sawed will be five inches by seven inches, or if hewn, five and a fourth by seven and a fourth, (to allow for counter hewing, or otherwise fitting them into the cross sills.) They must be sawn or hewn to full size, and with true sides and full angles, entirely free from exterior sap, and wave edges, and free from decay, knots, wind-shakes or other defects calculated to impair their strength or durability. They will be in lengths of 14, 17 and a half, 21, 24 and a half, or 28 feet, or either, or all of them, at the option of the contractor. The contractors will be expected to keep the rails in a position to prevent their springing or warping until inspected and received by the engineer.

4. *Keys and wedges*, (requiring 3,020 for each mile of railway.)—These wedges will be made of sound white or post-oak, or heart locust scantling four inches by four and a half inches square. These scantlings will be cut into blocks 14 inches long, and each block slit with a circular saw to a level, in conformity to models furnished the contractor; each block making two bevelled wedges.

5. *Delivery and disposition of the timber.*—Upon all or any portion of the timber being delivered at the point or points contracted for, the principal engineer will inspect or cause the same to be inspected; whereupon, the contractor will proceed forthwith to pile such parts of it as has been adjudged to be according to contract, in such manner and position as the engineer or other inspecting officer shall direct, in order to preserve the same from loss and injury by decay, warping or otherwise.

General Specifications.

The contractors will be required to furnish all materials at their own expense, which in all cases will be subject to inspection by the principal engineer before being used in the work.

The contractors will not obstruct any highway, travelled road, or bridge, in the vicinity of the work during the progress thereof; and in case when the line of railroad crossing or otherwise interferes with any such highway, road or bridge, the contractor will keep the same open, and in its ordinary repair, until the regular and permanent crossing for the same, over the railroad, shall be completed.

The contractors will be required to execute all the work in a perfect, correct, substantial and workmanlike manner, under the direction of the Commissioners, engineers, and in strict conformity to the stakes, or other marks which shall from time to time be set or made to designate the

ground, plans, slopes, profiles, and elevations of the line, and of the structures thereon; and for that purpose will be expected to take all possible care to preserve and perpetuate such stakes and marks during the progress of the work.

The acting Commissioner reserves to himself and his successors in office, the right and privilege to make any change and alterations in the work and manner of executing the same, which, in the progress thereof, may be deemed advisable. Any increase or diminution in the amount of work, of the same description as named in the contract, which may be caused by such change, will be paid or deducted for at the rate of the contract price.

If any items of new work, not named in the contract, should be required by such change, or if any increase or diminution of the relative value of the work contracted for should be so caused, then in those cases the work will be paid for at the estimate of the principal engineer for the time being, whose decision therein shall be final and conclusive.

Contractors will execute any items of new work occurring on their jobs, which may be deemed necessary by the Commissioner or principal engineer, and which may not be mentioned or contemplated in their contracts, if thereunto requested by the acting Commissioner or principal engineer, and will be paid therefor at the estimate of the principal engineer for the time being.

Where two or more contractors are concerned in a job, and enter into joint contract to execute it, they will be considered a firm in law, and the act of one of the partners, in the transaction of any business in relation to the contract, will be considered as binding on the whole.

All contracts will be required to be executed and fulfilled by and under the immediate personal superintendence of the contractors, and not by sub-contractors. Every description of work and all materials will remain at the risk of the contractors until the work or structures are fully completed and received by the acting Commissioner.

Estimates of the amount and relative value of the work actually done by the contractors on their respective jobs, will be made at stated periods during the progress thereof, not exceeding two months asunder; and not less than sixty-seven, nor more than eighty-five per centum of the amount of the estimate will be paid to the contractors; and the residue will be retained until the final completion of the job, as a security to the State for the faithful execution of the contracts. All payments will be made in notes of the State Bank of Illinois or branches, or of the Bank of Illinois or branches, or in such other funds as the Fund Commissioners of the State of Illinois shall furnish the acting Commissioner for the purpose of making such payments.

EDWARD SMITH,
Principal Engineer, &c.

Railroad Office,
Mount Carmel, Illinois, March 8, 1838.

A SYNOPSIS of the probable amount of work on the respective

Sections.		Clearing, Grubbing &c.			Graduation.		
No. of section.	Length in feet.	Acres of clearing, including the clearing of road-way under embankments less than 2 feet.	Acres of grubbing of road-way.	Acres of prairie sod to be removed from the road-way.	Cubic yards of earth excavation.	Cubic yards of rock excavation.	Cubic yards of embankment.
1	6,500	-	-	-	6,667	- -	7,758
2	4,500	5.50	1.00	-	50	- -	11,047
3	6,400	-	-	-	32,156	Stratified sand-stone rock may be encountered on this section at the summit of the ridge, say 1,000 yards.	11,771
4	6,400	9.80	1.00	-	15,124	Stratified sand-stone rock may occur on this section, say 1,000 yards.	9,239
5	4,600	7.80	1.10	-	8,56	- -	5,208
6	4,300	8.25	.75	.30	1,390	- -	4,544
7	5,300	11.50	1.10	.20	1,392	- -	6,373
8	6,000	2.30	.30	-	5,225	- -	14,215
9	4,600	10.50	.70	-	7,198	- -	12,811
10	5,400	12.50	.80	-	4,710	- -	8,327
11	5,200	12.50	.60	-	2,949	- -	4,713
12	5,300	5.75	.30	1.00	-	- -	3,564
13	5,300	9.20	1.30	-	1,358	- -	993
14	5,300	2.50	.30	-	-	- -	7,697
15	5,700	12.20	2.20	.50	1,292	- -	2,639
16	5,300	1.80	.30	-	3,839	- -	6,089
17	6,200	9.20	.30	-	21,069	Stratified sand-stone rock may be encountered in the deep cut on this section, say 1,000 yards.	37,498
18	4,100	6.90	.50	-	6,889	- -	6,172

NOTE—In reference to sections No. 3, 4 and 17, the inclemency of the weather and shortness of the time allowed for preparing the line of contract, have operated to defer examinations on those sections, which otherwise would have been made, and the results exhibited at the lettings. The occurring of rock cutting on these sections is only supposed from indications on the surface; and the quantity affixed to the respective sections is assumed, for the purpose of calculating the proposals therefor.

sections of the Eastern Division of the Alton and Mt. Carmel railroad.

Bridges and truss-work.		Stone drains.		Brick drains.		Wooden drains.		Remarks.
Lineal feet of bridging.	Lineal feet of truss-work.	No. of drains.	Perches of masonry of 25 cubic yards.	No. of drains.	Perches of masonry of 25 cubic feet (about 500 brick to one perch.)	No. of drains.	Feet (in timber measure) of timber necessary for construction.	
-	-	-	-	2	30			
-	*a* 200	-	-	1	19	1	400	
-	-	-	-	1	50	-	-	It is expected that the line on this section will undergo some revision, which may reduce the *amount* of work, but the *character* of work will remain the same as now exhibited.
-	-	-	-	1	50	1	810	A revision of a part of this section may be made, which may lessen the *amount* of the work, but not the character.
-	*b* 200	1	18	-	-	1	510	
-	*c* 200	-	-	-	-	1	420	
-	-	-	-	-	-	1	300	
-	-	-	-	-	-	2	1,200	
-	-	-	-	-	-	1	690	
-	-	-	-	-	-	2	1,100	
-	*d* 50	-	-	-	-	2	910	The embankment on this section will probably be increased in height, (say over 2 feet,) with a view to dispense with grubbing and to increase the capacity of the side ditches.
-	*e* 100	-	-	-	-	2	-	The note on section 11 is applicable to a part of section 12.
f 120	*g* 140	-	-	-	-	1	510	
		2	20					
-	*h* 300	1	16					
-	-	3	30					
-	*i* 40	2	38	-	-	-	-	It is expected that a change will be made in the location of this section that will equalize the cuttings and fillings; perhaps reduce the quantity of the aggregate amount of both—the *character* of the work remaining nearly as now exhibited.
-	-	6	59	-	-	-	-	A revision of the line on this section may be made; but it will not materially affect either the amount or character of the work as now exhibited.

NOTE—On sections where revision of the line is contemplated, this work will be performed at as early a day, and with as little delay to the contractors, as possible.

On so much of any section as runs through cultivated land, the fences on both sides of the road-way will be put up, either by the contractor, under the direction and at the estimate of the principal engineer, or by the owner of the land, previous to commencing the graduation of the road in such field.

a Over Great-house creek—about 14 feet elevation. *b* Over slough—about 6 feet elevation. *c* Over Coffee creek—about 7 feet elevation. *d* Over bottom land. *e* Over Crackle's creek. *f* In 3 spans. *g* For double track—see drawings. *h* In different locations. *i* Over branch of Still-house creek.

SYNOPSIS of work under contract in the Eastern Engineering District, with

Names of the contractors.	No. of sections.	Length of sections, in feet.	Cubic yards of excavation put into embankment.	Already put into embankment.	Remaining to be put into embankment.	Cubic yards of wasted earth.	Already wasted.	Remaining to be wasted.
CENTRAL BRANCH RAILROAD.								
Division No. 1.								
David Scott & Co. - -	1	4,500	–	–	–	369	369	-
S. & G. Ewing - -	2	5,200	221	–	221	167	167	-
Paddock, Jackson & Lee -	3	4,200						
David Scott & Co., - -	4	5,600	394	–	394	50	50	-
Same - - -	5	4,400	2,016	1,487	529	–	-	-
Same - - -	6	5,600	707	426	281	166	166	-
Same - - -	7	4,400	2,004	1,209	795	405	-	405
Same - - -	8	5,600	568	309	259	133	133	-
J. Ryan, & Cushing & Blake -	9	5,400	–	–	–	–	-	-
M'Reynolds & Co., & Cushing & Blake - - -	10	5,600	5,082	4,582	500	8,505	7,142	1,363
Stark & How, & J. L. Burleigh	11	5,600	21,278	18,917	2,361	1,932	1,932	-
John Donegan - -	12	6,000						
M'Reynolds & Co. - -	13	6,400	1,381	1,200	181	–	-	-
Same - - -	14	5,200						
J. W. Brown - - -	15	6,000	2,692	1,414	1,278	–	-	-
Same - - -	16	5,200	2,794	1,839	955	1,991	1,991	-
Hendrickson & M'Farland -	17	5,600						
Same - - -	18	4,600						
Cary, Sandford & Wampler -	*							
S. & G. Ewing - -	‡							
Division No. 2.								
Cushing & Blake - -	32	6,800	122,232	1,065	121,167	3,500	-	-
Johnson, Shepherd & Co. -	33	5,800	38,911	5,308	33,603	–	-	-
NORTHERN CROSS RAILROAD.								
Division No. 2.								
Stoughton & Patton, Breed & Livingston, & T. H. Cushing	11	7,250	75,100	17,000	58,100	9,000	3,000	6,000
Stoughton & Patton - -	12	5,000	–	–	–	1,000	-	1,000
Morgan L. Payne - -	13	5,400	–	–	–	–	-	-
M'Kibben, Cassaday & Co. -	14	6,150						
Same - - -	15	6,090						
Same - - -	16	7,257	400	400	–	200	-	200
Same - - -	17	4,810	–	–	–	–	-	-
Same - - -	18	6,000	1,200	1,200	–	–	-	-
Same - - -	19	6,000	–	–	–	–	-	-
Same - - -	20	6,000	–	–	–	–	-	-
Same - - -	21	6,000	–	–	–	–	-	-
Same - - -	22	6,000	10,000	4,500	5,500	1,500	1,000	500
Same - - -	23	5,600	–	–	–	–	-	-
Same - - -	24	5,300	2,810	1,200	1,600	400	-	400
Same - - -	25	5,300	932	932	–	-	-	-
Same - - -	26	5,800	3,080	–	3,080	1,000	-	1,000
Same - - -	†							

*Superstructure lineal feet of stringers contracted for -	190,000	Mud-sills	210,000
" do. do. already delivered	29,990	delivered	30,222
Remaining to be done - - - - -	160,010	- -	179,778

†Timber for superstructure, string pieces delivered, 7,796 lineal feet. Mud-sills 6,142 l. ft.

an abstract of expenditures upon the same, up to December 15, 1838.

Cubic yards of borrowed earth put into embankment.	Already borrowed.	Remaining to be borrowed.	Perches of masonry.	Already done.	Remaining to be done.	Lineal feet of bridging.	Already done.	Remaining to be done.	Number of wooden culverts.	Already built.	Remaining to be built.	Rods of grubbing and clearing.	Already grubbed and cleared.
14,856	3,900	10,956	-	-	-	240	150	90	-	-	-	1,411	1,411
9,507	4,692	4,815	-	-	-	-	-	-	2	2		1,519	1,519
4,314	2,219	2,095	-	-	-	-	-	-	1	1	-	1,547	1,547
3,670	2,785	885	-	-	-	-	-	-	1	1	-	1,295	1,295
5,210	5,034	176	-	-	-	-	-	-	1	1	-	1,646	1,646
8,088	7,107	981	-	-	-	200	75	125	1	1	-	1,295	1,295
7,041	6,435	606	-	-	-	120	120	planking	1	1	-	1,646	1,646
-	-	-	-	-	-	500	200	300					
5,333	3,646	1,687	-	-	-	800	300	500	1	1	-	1,501	1,501
4,851	3,381	1,470	-	-	-	425	425	planking	4	4	-	1,276	1,276
8,119	6,894	1,225	-	-	-	-	-	-	2	2			
7,789	3,353	4,436	-	-	-	-	-	-	3	3	-	309	309
5,982	2,102	3,880	-	-	-	-	-	-	4	4			
-	-	-	-	-	-	-	-	-	-	-	-	1,764	
45,248	-	45,248	-	-	-	-	-	-	-	-	-	1,588	1,000
-	-	-	6,216	1,993	4,223	400	70	330	-	-	-	1,485	1,485
800	-	800											
12,236	10,200	2,036	134	134	-	-	-	-	2	2			
600	-	600	-	-	-	-	-	-	1	-	1		
5,648	1,500	4,148	-	-	-	-	-	-	2	-	2		
-	-	-	-	-	-	-	-	-	1	-	1		
-	-	-	-	-	-	-	-	-	2	-	2		
600	-	600	-	-	-	-	-	-	2	-	2		
-	-	-	285	95	190	-	-	-	1	-	1		
1,500	-	1,500	-	-	-	-	-	-	3	-	3		
5,008	2,000	3,008	160	60	100	-	-	-	2	-	2		
5,009	2,400	2,609	-	-	-	-	-	-	3	-	3		
3,595	600	2,995	180	150	30	-	-	-	2	-	2		

‡Sleepers to be delivered 18,000
Delivered - - 1,360

Remaining - - 16.640

SYNOPSIS of work under contract in the

Names of the contractors.	No. of sections.	Remaining to be grubbed and cleared.	Am't of sundries.	Already done.	Remaining to be done.	Cash paid on contracts.
CENTRAL BRANCH RAILROAD.						
Division No. 1.						
David Scott & Co. - -	1	.	$300	$200	$100	$1,554 55
S. & G Ewing - -	2	.	.	.	.	1,121 13
Paddock, Jackson & Lee -	3	.	50	.	50	1,481 42
David Scott & Co. - -	4	.	200	.	200	.
Same - - -	5	.	200	.	200	.
Same - - -	6	.	200	.	200	.
Same - - -	7	.	200	.	200	.
Same - - -	8	.	75	40	35	9,752 14
J. Ryan, & Cushing & Blake -	9	.	100	8	92	5,166 80
M'Reynolds & Co., & Cushing & Blake - - -	10	.	150	.	150	5,871 98
Stark & How, & J. L. Burleigh	11	.	.	.	.	8,410 12
John Donegan - - -	12	.	150	.	150	966 35
M'Reynolds & Co. - -	13	.	.	.	.	.
Same - - -	14	.	150	90	60	2,229 08
J. W. Brown - - -	15	.	100	33	67	.
Same - - -	16	.	100	21	79	1,541 21
Hendrickson & M'Farland -	17	.	.	.	.	.
Same - - -	18	.	.	.	.	3,748 85
Cary, Sandford & Wampler -	.	.	.	.	.	1,928 35
S. & G. Ewing - -	.	.	.	.	.	132 06
Division No. 2.						
Cushing & Blake - -	32	1,764	.	.	.	253 47
Johnson, Shepherd & Co. -	33	588	.	.	.	1,129 02
NORTHERN CROSS RAILROAD.						
Division No. 2.						
Stoughton & Patton, Breed & Livingston, & T. H. Cushing	11	.	8,900	3,863	5,037	21,688 52
Stoughton & Patton - -	12	.	.	.	.	.
Morgan L. Payne - -	13	.	.	.	.	1,228 01
M'Kibben, Cassaday & Co. -	14	.	.	.	.	.
Same - - -	15	.	.	.	.	.
Same - - -	16	.	70	.	70	
Same - - -	17	.	50	.	50	.
Same - - -	18	.	125	.	125	
Same - - -	19	.	100	.	100	.
Same - - -	20	.	100	.	100	.
Same - - -	21	.	100	.	100	.
Same - - -	22	.	150	.	150	
Same - - -	23	.	125	.	125	.
Same - - -	24	.	150	.	150	
Same - - -	25	.	100	.	100	
Same - - -	26	.	200	.	200	11,187 59
Same - - -	.	.	.	.	.	.

Eastern Engineering District—Continued.

Cash retained on contracts.	Total cost of work as per definite locations.	Estimated cost on the approximate locations.	Remarks.
$998 09	$5,061 91	$5,713 61	
435 05	2,456 28	2,378 80	
450 73	2,578 93	2,868 60	Finished except dressing.
.	1,814 23	2,168 42	
.	1,977 35	2,661 58	
.	2,095 38	2,323 24	
.	4,941 87	6,599 71	
1,710 96	3,125 41	3,192 76	
583 86	7,620 41	7,262 35	Finished except bridging.
889 45	12,816 92	12,523 10	
940 56	9,084 64	7,398 37	
181 21	1,227 41	944 55	Finished except dressing.
.	1,396 67	1,448 60	
393 43	1,577 00	1,167 66	Finished except dressing.
.	1,860 77	1,815 04	
282 30	2,068 65	3,219 56	The approximate grade was much changed on the definite location.
.	.	.	Finished and accepted.
.	3,748 85	3,606 53	Finished and accepted.
340 33	14,968 00		
30 93	2,025 00		
44 73	.	87,475 16	Masonry and bridging not contracted for.
199 24	.	22,270 84	
6,324 54	91,686 00	93,778 54	
.	.	.	Finished except 1 stone culvert and dressing.
216 72	2,093 73	3,548 07	Finished except dressing, &c.
.	.	.	Finished except dressing, &c.
.	.	.	Finished except dressing, &c.
.	.	.	Finished except dressing, &c.
.	.	.	Finished except dressing, &c.
.	.	.	Finished except dressing, &c.
.	.	.	Finished except dressing, &c.
1,974 35	22,080 07	20,801 64	
.	.	.	Contract now abandoned.

ABSTRACT of cash received and disbursed by M. K. Alexander, Commissioner B. P. W., Fourth Judicial Circuit, Illinois.

	Cash Received.			Eastern district.	Cash disbursed.				
	Drafts.	Special drafts.	Total.	Names of contractors.	Construction.	Right of way.	Engineering.	Sundries.	Total.
Northern Cross Railroad	$45,640 26	.	$45,640 26	. .	.	$300	$4,167 80	$1,666 89	$6,134 69
Central Branch Railroad	50,000 00	$4,945 76	54,945 76	. .	.	140	4,707 20	2,063 32	6,910 53
Central Railroad .	.	.	.	. .	.	.	1,554 23	406 68	1,960 91
General expenditures .	8,500 00	.	8,500 00	. .	.	.	4,217 75	3,184 70	7,402 45
				Northern Cross Railroad.					
				Cassaday, M'Kibben & Co. .	$11,187 63				
				Morgan L. Payne . .	1,228 01				
				Stoughton & Patton . .	11,450 77				
				Breed & Livingston . .	6,122 09				
				Thomas H. Cushing . .	4,115 66	.	.	.	34,014 16
				Central Branch Railroad.					
				Stark & How . .	4,449 22				
				J. M'Reynolds & Co. . .	5,557 93				
				James Ryan . .	2,457 87				
				Joseph L. Burleigh . .	5,427 40				
				C. G. Van Buren . .	85 51				
				John Donegan . .	966 35				
				Hendrickson & M'Farland .	3,748 85				
				David Scott & Co. . .	11,306 69				
				Paddock, Jackson & Lee .	1,481 42				
				S. & G. Ewing . .	1,194 36				
				J. W. Brown . .	1,541 21				
				Ray & Ewing . .	59 83				
				Cary, Sandford & Wampler .	1,928 35				
				Johnson & Shepherd .	1,129 02				
				T. H. Cushing & Blake .	5,087 46	.	.	.	46,421 46
									$102,934 21
									†2,795 00
Total .	$104,104 26	$4,945 76	$109,086 02	. .	.	$440	*$14,646 93	$7,321 60	$105,729 21

*Expenditures of the above engineering comprise the amounts of cash paid to the engineers and other men composing the surveying parties.
†M. K. Alexander's compensation as Commissioner. Fractions excluded in print.

Report of C. L. Seymour, Assistant Engineer.

RAILROAD OFFICE,
Mount Vernon, October 15, 1838.

TO EDWARD SMITH, Esq.
Principal Engineer of the Southern Cross Railroad, &c.

SIR: In accordance with your letter of instructions, dated August 13, I proceeded on to Albion with the party and commenced running the line west towards Fairfield. It was the intention to find, if possible, a nearer route to Fairfield than was made by the former survey, by curving to the north and following up the valley of Woodland creek, and cross the ridge on the west side of this valley, and to pass near the mouth of White-oak branch in the direction of Fairfield; and with this view I commenced at the west end of section number 18, near Albion, and ran the west as far as Woodland creek; thence, curving to the north and following up the same, a distance of about three miles, before I could find a suitable place for crossing the ridge. The valley of Woodland creek lies about five degrees east of north, thus throwing the line off in a north-easterly direction, instead of west, which direction the line should take. From this point to the mouth of the White-oak branch, which place you mention in your letter of instructions, the line assumes a southwestwardly direction for a distance of about seven or eight miles, thus making the distance greater than by the old survey.

Having ascertained this fact, I returned to the starting point and continued the tangent on the west end of section number 18, and ran south 67 degrees west, to near Sidney Springs; thence curving to the north, and passing near William Wood's house; thence curving to the west until we obtain north 81° west. On this course the line extends to Fairfield, a distance of about twelve miles, on one straight line, but owing to the rough and broken country on the west side of the Little Wabash river, I returned to near Wm. Wood's, and ran the line north 88 degrees west, until we reached the White-oak branch; thence curving to due west, and ran the line on as far as David King's farm, and adopted this as the most feasible route; and as the time was near when the party were to be at Carlyle, I sent them on agreeable to your instructions.

Since the return of the party from the Kaskaskia river, at Carlyle, I have revised the line from Albion west, as far as William Wood's place of residence, by curving to the south, at the end of the 18th section, 3 degrees, and running south 63 degrees west, to near Sidney Springs; which line runs upon level ground the greater part of the distance, and close along the edge of the broken ground, and making a tangent of about six miles in length; thence curving to the north upon a radius of 1,432 feet, and joining the former line. I have also meandered the Little Wabash river, near the mouth of the White-oak branch, for a distance of about one mile and a half, and find that the line could be changed to advantage by curving one degree more south, near Wm. Wood's, which would extend the tangent to beyond or west of David King's place of residence; thus superseding the necessity of a curve at the mouth of White-oak branch, and also lessen the amount of embankment on section 27. This alteration I should have made, had the time before the letting been sufficient to have allowed me to do so.

The map, profile, and plans of bridges, together with an estimate of cost for grading sections numbered 25, 26, and 27, are herewith submitted for your inspection by

Your obedient servant,
C. L. SEYMOUR.

Estimate of cost for grading Sections No. 25, 26, and 27, upon the Eastern Division of the Southern Cross Railroad, extending from Alton to Mount Carmel.

SECTION No. 25.

11.50	acres of clearing, at $30 per acre	$345 00
3.75	acres of grubbing, at $125 per acre	468 75
14,644	cubic yards of embankment, at 20 cents per yard	2,928 80
200	feet of truss bridging, at $5 per foot run	1,000 00
Total		4,742 55

SECTION No. 26.

12.63	acres of clearing, at $30 per acre	$378 90
4.13	acres of grubbing, at $125 per acre	516 25
24,015	cubic yards of excavation, at 15 cents per yard	3,602 10
9,399	cubic yards of embankment, at 20 cents per yard	1,879 80
200	feet of truss bridging, at $5 per foot run	1,000 00
Total		7,377 05

SECTION No. 27.

12.63	acres of clearing, at $30 per acre	$378 90
4.13	acres of grubbing, at $125 per acre	516 75
52,925	cubic yards of embankment, at 20 cents per yard	10,585 00
1,166	cubic yards of masonry for bridge abutments, at $6 per yard	6,696 00
100	feet of bridging over White-oak branch, at $10 per foot run of the bridge way	1,000 00
100	feet of truss bridging, at $5 per foot run	500 00
Total		19,676 65

SUMMARY.

Section No. 25	$4,742 55
Section No. 26	7,377 05
Section No. 27	19,676 65
Total of the three sections	31,796 15

NOTE.—The report of J. W. HOYT, Engineer of the Eastern Engineering District, to the Commissioner of the Fourth Judicial Circuit, will be found near the close of the volume; also the report of D. BURR, Principal Engineer of the States of Indiana and Illinois, on the improvement of the Wabash river.

EXHIBIT No. V.

REPORT OF JOEL WRIGHT,

WITH ACCOMPANYING DOCUMENTS.

VANDALIA, *Dec.* 13, 1838.

To the PRESIDENT *of the Board of Public Works of the State of Illinois.*

The undersigned, Commissioner of the fifth judicial circuit, has the honor to submit the following report.

Since that part of the Northern Cross railroad lying in this circuit was placed under the superintendence and control of the Commissioner of the first circuit, the only work remaining in the charge of the undersigned, is the Peoria and Warsaw railroad. The report of H. P. Woodworth, chief engineer, with the schedules, numbers 1 and 2, thereto annexed, which are herewith submitted, will show the operations on this road since the last meeting of the Board, and the state of the work under contract on the eastern division of the same on the first, and on the western division, on the 15th day of November last. Since those dates there has been paid, for the legal per centage on work done on the first named division, the sum of $4,095 61.

The following is a statement of the receipts and expenditures by the undersigned, since his last semi-annual report.

Balance on hand as reported - - -		$5,041 49
Amount drawn for the Peoria and Warsaw railroad -		65,271 43
Amount drawn for the general fund - -		1,950 00
Amount of contract drafts - - - -		6,699 74
Property sold - - - - -		5 00
		$78,967 66
Expended on the Peoria and Warsaw railroad	$50,188 03	
Same (charged to general fund) - -	8,212 26	
Same, contract drafts - - -	6,699 74	
	65,100 03	
Amount for Northern Cross railroad charged to general fund - - - -	731 52	
Balance, being cash on hand - -	13,136 11	
		78,967 66

The whole amount received by the undersigned since the commencement of the public works is as follows:

Amount drawn for Peoria and Warsaw railroad -	$74,271 43
Amount of contract drafts for same - - -	6,699 74
Amount of property sold - - - -	103 25
Amount drawn for Northern Cross railroad - -	7,000 00
Amount of general fund - - - -	4,950 00
	$93,024 42

The amount expended is—

On the Peoria and Warsaw railr'd	$65,390 78	
Same (charged to general fund) -	9,834 79	
		75,225 57
Northern Cross railroad - -	1,822 96	
Same (charged to general fund) -	2,839 78	
		4,662 74
Balance, being cash on hand - -		13,136 11
		$93,024 42

All which is respectfully submitted.

J. WRIGHT, *Com'r, &c.*

Report of H. P. Woodworth.

RAIL ROAD OFFICE,
La Salle county, Nov. 27, 1838.

To the COMMISSIONERS *of the*
Northern Engineering District of Illinois.

GENTLEMEN: In accordance with practice and precedent, and in the discharge of my duty as your chief engineer, I have the honor of laying before you, with other accompanying documents, the following brief report.

You are well aware of the peculiar state of things relating to the duties of chief engineer in this district, when I first entered upon those duties—roads located, and works at various points put under contract, without the supervision or even direction of a general superintending head—assistant engineers tenacious of their location, plans of work, and schemes of operation, and naturally and justly jealous of innovations upon the same—contractors ready to exclaim against any change in grade direction, or kind of work—and what promises to be still more annoying, envious and jealous and disappointed persons were known to stand ready to seize upon every thing not strictly in accordance with their bigoted and limited notions upon what might perhaps be beyond the comprehension of their shallow understandings, upon which to base arguments to prejudice the public mind against individuals in particular, and the system of internal improvement in general. I have, however, endeavored to conduct the public works under my charge, without allowing the above considerations to influence me at all to the prejudice of public interest.

On entering upon my duties as your chief engineer, my first care was to make myself fully and thoroughly acquainted with the nature, situa

tion and progress of every work of improvement in this district, by my own personal examinations; and, also, thoroughly to inform myself with the plans and views of my assistants in relation to them. The results of my investigations were very satisfactory. Every thing seems to have been conducted with accuracy and judgment, and in no instance should I have differed essentially in the locations, plans of work, &c. from the gentlemen engineers who had conducted the work thus far; and I am happy, at this time, to bear witness to their individual skill and the untiring zeal which has been manifested by them in conducting the different works over which they have the more immediate superintendence. Of those works I will speak in detail.

Peoria and Warsaw Railroad.

The twelve miles of this work, which is under contract from Peoria out, bids fair for completion within the specified time. No unexpected difficulties have been encountered, and the work for the most part has gone on smoothly. Some slight changes in grade and direction have been found necessary, but in no instance, it is believed, to the prejudice of the construction. Rock has in some instances been found where earth only was expected, which of course increases the expense of excavation. The accompanying schedule (number 1,) will exhibit to you the amount, kind and cost of work done, and also to be done on this portion of the road. On the twelve miles from Warsaw less has been accomplished, notwithstanding every exertion has been made to forward the work. It is believed, however, that the contract may be fulfilled in due season.

Schedule number 2 exhibits the state of this portion of the road.

Central Railroad.

That portion of this road extending twenty miles from Galena was put under contract in May last. Contractors immediately commenced their operations with demonstrations at least of conducting their respective jobs with much energy and honesty. Unfortunately it has turned out otherwise. Contractors absconded, jobs were abandoned, and notwithstanding the greatest exertions of the resident engineer, much confusion and delay ensued. Other causes also had their influences to perplex and retard the progress of this work; among which it is sufficient to mention the protracted and painful illness of our late and much lamented Commissioner, Col. Stephenson—the unusual sickness of the season, and the difficulty experienced in procuring laborers during the mining season. Things, however, are fast assuming a new and settled state, and with the exception of Doct. Power's contract, (which I think ere long must suffer a change) there is a fair prospect that the work will be conducted as it should be, and that the final completion will not be prolonged beyond the specific time. For further particular information, I refer you to schedule number 3.

In the month of June, twenty-two miles of this road, on the Illinois river, was put under contract. Fortunately this work fell into good hands, and has so far been conducted under fortunate circumstances, and conse-

quently has rapidly progressed towards completion. No difficulties have as yet been encountered, and there appears to be made every necessary arrangement, by the contractors, for pressing forward with their heavy jobs during the ensuing winter; and there appears nothing at present to prevent the prompt fulfilment of all the contracts. See accompanying schedule number 4.

Rock River Improvements.

The improvements of the Lower rapids were put under contract in May. Able and experienced contractors are conducting that work. The stage of water has been very favorable so far, and as much has been accomplished as could have been expected. Some deviation from the original plan of work will be found necessary, on account of not being able to procure the stone as first contemplated. The cost of the work will not be materially altered by the proposed change, and it is believed the work will be completed at an early period and in the best possible manner. See schedule number 4.

On the whole I believe there has been as much accomplished on the public works as could have been reasonably expected, and I am confident in saying that the same quantity of work similarly situated has never been conducted with more enterprise and a fairer promise of speedy completion. It is also worthy of remark that nearly all the heavy and difficult and expensive work is embraced in the present contracts, and that which remains is principally light grading, upon smooth open prairie, which probably will not cost, on an average, over $1,000 per mile.

Engineering and Field Operation.

Having two often experienced the evils of hurried locations, and of preparing work for contract on short notice, I have caused as much of our railroad lines to be located as seemed consistent with economy and the strength of our engineering parties. On the eastern division of the Peoria and Warsaw road, twenty miles have been located, extending from the work under contract to Canton, and on the western divisions ten miles extending to Carthage. The company that made these locations have been engaged in making examinations and surveys for the improvement of the route between Carthage and Macomb. The results of those operations will be reported to the acting Commissioner as soon as they can be made out.

All that portion of the Central railroad lying in the seventh circuit has been located, and the line of location continued as far as the Rocky ford in the sixth; also on the western or Galena division, ten miles extending to Savannah, has been prepared for contract. Reports, maps, plans profiles and estimates on the above work, will be presented to the acting Commissioner as early as practicable.

There has been so much local as well as individual feeling exhibited in relation to the location of the railroad on Rock river, that I have deemed it expedient to have thorough surveys made on every possible route between Savannah and the above river. For this purpose there has been a party in

the field since about the first of August. The result of those surveys will be reported to the acting Commissioner as early as possible, and, together with what was done last year, will afford him a sufficient data at least to make a location on the cheapest route. Other considerations, however, besides the results of bare engineering operations, should have their due weight in deciding upon the point for crossing Rock river.

The present season has sufficiently demonstrated the necessity of some improvements at least in the navigation of the Illinois river. I have taken advantage of the very low stage of water, and caused surveys to be made, with examinations of all obstructions to steam navigation, from the terminating of the Michigan canal to Peoria. The accompanying report of Gen. Ransom will furnish the detail of the above mentioned survey.

Such, gentlemen, is a brief view of the progress, present state, and future prospects of the works of internal improvement in the northern engineering district. Much has been done, and much credit certainly is due the engineering corps generally, and to the principals who have had the more immediate control of the different works in particular.

In conclusion, perhaps you may expect from me suggestions in relation to future operations. On this point I feel no little diffidence, knowing, as I do, that much must depend upon future circumstances over which you may have no control. It will not be improper, however, for me to suggest and urge the propriety of pressing forward the improvement of the rivers. The Illinois river in particular demands immediate attention—and as the improvement consists principally in the removal of bars, the work may be commenced early in the spring. Dredging machines can only be used to advantage in this operation, and as there are two now at this place which are peculiarly well calculated for river work, I would suggest the propriety of making some arrangements to employ them as early as possible. Even one of those machines will do much towards improving the navigation, even in one season. I would also recommend that such portions of the different roads as will form continued lines from navigable waters to some important port, or towns in the interior, should be put under immediate contract, and the work hastened to completion. Utility might then soon be demonstrated to the skeptical, and visible tangible facts could be made use of to combat opinions and prejudices against the present system of internal improvements. For the above purpose let the lines between Peoria and Canton, and between La Salle and Rock river, at least. Those two portions, in my opinion, possess advantages that should not be overlooked, and which will readily suggest themselves to your understandings. Other work might be put under contract to good advantage, and without prejudicing in the least works already begun.

Respecting superstructure, &c. I deem it premature to make any suggestions, but will remark that whatever plan or plans may be adopted, there appears to be an abundance of good material, which can easily be obtained for any of our purposes, without going far from the lines.

H. P. WOODWORTH.

SCHEDULE No. 1.

Amount of work done on the Eastern Division of the

Number of Sections.	Grubbing & clearing.	Cubic yards of excavation.	Price per yard.	Amount.	Cubic yds of embankment.	Price per yard.	Amount.	Cubic yards stratified rock excavation.	Price per yard.	Amount.	Cubic yards of rough masonry.	Price per yard.
			cts			cts			$			$
1	$36 00	658	16	$105 28	3,100	22	$682 00	-	-	-	2,255	3 00
2	40 00	1,209.2	14	169 28	2,339.15	18	421 02	-	-	-	†9.3	3 00
3	50 00	3.874	15	581 10	6,121	16	979 36	-	-	-	19.35	3 50
4	100 00	22,878	14	3,202 92	24,648	14	3,450 72	-	-	-	26.88	3 50
5	250 00	7,238	16	1,158 08	12,204	17	2,074 68	800	1 00	$800	875	3 00
6	800 00	1,041	18	187 38	18,121	16	2,899 36	395	1 00	395	-	-
7	300 00	-	-	-	3,500	19	665 00	-	-	-	-	-
8	20 00	22,014	18	3,962 52	2,200	16	352 00	307	1 00	307	52.40	4 00
9	12 00	8,811	13	1,145 43	13,505	16	2,160 80	-	-	-	106.88	2 00
10	120 00	2,042	14	285 88	*2,042	17	347 14	-	-	-	54	2 50
11	5 00	11,204	14	1,568 56	1,761	15	264 15	-	-	-	†4.37	3 00
12	25 00	1,287.05	14	180 19	7,594.62	15	1,139 19	-	-	-	†38.62	3 00
	1,758 00	-	-	12,546 62	-	-	15,435 42	-	-	1,502	-	-

Amount of work to be done on the Peoria and

						cts			$			
1	-	-	-	-	309	22	$67 98	-	-	-	-	-
2												
3	-	2,025	15	$303 75	4,917	16	786 72	-	-	-	-	-
4	-	8,464	14	1,184 96	9,024	14	1,263 36	-	-	-	-	-
5	$50 00	2,946	16	471 36	5,970	17	1,014 90	500	1 00	$500	-	-
6	480 00	12,375	18	2,227 50	38,755	16	6,200 80	2605	1 00	2,605	-	-
7	25 00	11,874	16	1,899 84	59,953	19	11,391 07	-	-	-	-	-
8	-	4,447	18	800 46	1,667	16	266 72	-	-	-	-	-
9	-	-	-	-	1,236	16	197 76	-	-	-	215	2 50
10	-	7,477.41	14	1,046 83	50,141	16	8,022 56	-	-	-	-	-
	555 00	-	-	7,934 70	-	-	29,211 87	-	-	3,105	-	-

* R. B.
† Final estimate.

SCHEDULE No. 1.

Peoria and Warsaw Railroad, up to the 1st November, 1838.

Amount.	Cubic yards of dressed masonry.	Price per yard.	Amount.	Cubic yds slope wall.	Price per yard.	Amount.	Sundries.	Total amount.	Fifteen per cent. discount.	
$67 65	-	-	-	-	-	-	-	$890 93	$133 63	$757 30
27 90	3	4 50	$12	-	-	-	-	670 20	-	670 20
67 72	3	5 00	15	-	-	-	-	1,693 18	253 97	1,439 21
94 00	-	-	-	330	2 00	$660 00	*a* $79 50	7,587 14	1,133 07	6,449 07
262 50	104	4 00	418	794.5	2 00	1,589 00	*b* 1800 00	10,246 26	1,536 94	8,709 32
	428	4 25	1,819							
-	-	-	-	105.77	2 00	211 54	*c* 75 00	5,512 80	826 92	4,685 88
							d 1019 52			
-	-	-	-	-	-	-	-	965 00	144 75	820 25
208 00	-	-	-	-	-	-	*e* 100 00	4,949 52	742 43	4,207 09
213 76	-	-	-	-	-	-	-	3,531 99	529 80	3,002 19
135 00	-	-	-	-	-	-	*f* 1600 32	2,488 34	375 25	2,113 09
131 10	-	-	-	-	-	-	-	1,968 81	-	1,968 81
115 86	-	-	-	-	-	-	-	1,460 24	-	1,460 24
1,323 49	-	-	2,260	-	-	-	4,674 34	41,964 41		

Warsaw Railroad, in the Eastern Division.

-	-	-	-	-	-	-	-	$67 78	
-	-	-	-	-	-	-	-	1,090 47	
-	-	-	-	270	2 00	$540 00	-	2,988 32	
-	-	-	-	200	2 00	400 00	*g* $840	3,276 26	
-	-	-	-	-	-	-	*h* 4,000	15,513 30	Rather too much
-	-	-	-	-	-	-	*i* 3,000	16,315 91	
-	-	-	-	-	-	-	*j* 1,000		
							k 400	2,467 18	
$537 50	-	-	-	-	-	-	-	197 76	
-	-	-	-		-	-	-	9,606 89	
537 50	-	-	-	-	-	940 00	9,240	51,524 07	

a 79.5 cubic yards rock in foundation wall. *b* Bridge and tressle work. *c* Excavation of abutment pits. *d* Excavation of the channel of creek 5,664 cubic yards. *e* 50 cubic yards rock hauled, (not laid.) *f* 10,002 cubic yards embankment borrowed earth, at 16 cents. *g* Bridge and tressle. *h* Bridge abutments. *i* Bridge abutments. *j* Paving drains. *k* Bridge abutments.

SCHEDULE No. 2.

Estimate of work to be done on the Western Division of

Number of Sections.	Clearing & grubbing.	Cubic yards of embankment.	Price per yard.	Amount.	Cubic yards of excavation.	Price per yard.	Amount.	Cubic yards of solid rock excavation.	Price per yard.	Amount.	Cubic yards stratified rock excavation.	Price per yard.	Amount.	Cubic yards of rough masonry.	Price per yard.
	$		cts	$		cts	$		cts	$		cts	$		cts
116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115	200	7,598	17	1291 66	3,070	16	491 20	-	-	-	-	-	-	266	4 00
114	270	10,609	17	1803 53	4,648	16	73 68	-	-	-	1,000	40	400 00	300	4 00
109	260	5,713	17	971 21	4,413	16	706 08	-	-	-	-	-	-	147	4 00
108	250	9,667	17	1643 39	3,979	16	636 64	-	-	-	-	-	-	200	4 00
107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106	100	10,524	17	1789 08	2,491	16	398 56	-	-	-	-	-	-	-	-
105	-	3,025	16	484 00	3,819	15	572 85	-	-	-	-	-	-	-	-
107	-	1,997	17	339 49	974	15	146 10	-	-	-	-	-	-	36	4 00
106	-	220	16	35 20	1,793	14	251 02	-	-	-	-	-	-	21	4 00
105	-	8,545	19	1623 50	1,941	14	271 74	-	-	-	-	-	-	142	5 00

Estimate of work done on the Western Division of the

116	50	5,240	16	838 40	14,702	16	2352 32	822	125	1027 50	3,676	40	1470 40	76½ 9¼	3 50 5 00
114	250	270	17	45 90	2,034	16	330 24	-	-	-	715	40	286 00	-	-
111	100	1,632	15	244 80	5,224	14	731 36	38	200	76 00	29	95	28 00	191	2 00
109	-	2,434	16	389 44	4,890	15	733 50	-	-	-	-	-	-	45½	3 50
108	-	4,971	14	720 79	3,374	13	455 49	-	-	-	-	-	-	-	-
107	-	1,744	17	296 48	589	15	88 35	-	-	-	-	-	-	8	4 00
106	-	14	16	2 24	3,011	14	421 54	-	-	-	-	-	-	-	-
105	-	1,420	19	269 80	3,971	14	555 94	-	-	-	-	-	-	-	-
	400	-		2807 85	-	-	5668 74	-	-	1103 50	-	-	1784 40	-	-

SCHEDULE No. 2.

the Peoria and Warsaw Railroad, after November 15, 1838.

Amount.	Cubic yards of dressed masonry.	Price per yard.	Amount.	Cubic yards of slope wall.	Price per yard.	Amount.	Sundries.	Total amount.	Fifteen per cent. discount.	Total amount paid.
$		$	$		$	$	$	$		
-	-	-	-	-	-	*5,000	-	5,000 00		
1,064 00	-	-	-	300	2 50	750	-	3,796 86		
1,200 00	-	-	-	-	-	-	-	4,417 21		
588 00	-	-	-	-	-	-	-	2,325 29		
800 00	-	-	-	-	-	-	-	3,330 03		
-	-	-	-	-	-	-	-	†10,000 00		
-	35	5 00	175 00	-	-	-	-	2,462 64		
-	145	6 50	942 50	-	-	-	-	1,999 35		
154 00	-	-	-	-	-	-	‡253 40	882 99		
84 00	-	-	-	-	-	-	-	370 22		
710 00	-	-	-	-	-	-	-	2,605 24		
								37,389 83		

Peoria and Warsaw Railroad, up to Novewber 14, 1838.

267 16 46 25	88	5 50	484 00	706	2 00	1,412 00	*a* 381 30	$8,529 33	1,279 40	7,219 93
-	-	-	-	-	-	-	-	912 14	136 82	775 32
382 00	418	7 00	2,926 00	10½	2 00	21 00	*b* 872 00	5,381 16	807 17	4,573 99
158 67	34.86	7 50	256 95		-	-	*c* 40 00	1,587 56	238 13	1,349 43
							d 9 00			
-	-	-	-	-	-	-	*e* 77 80	◊ 1,254 08	-	1,254 08
32 00	-	-	-	-	-	-	*f* 108 45	525 28	78 79	446 49
-	-	-	-	-	-	-	-	423 78	63 56	360 22
-	-	-	-	-	-	-	-	825 74	123 86	701 88
886 08	-	-	3,666 95	-	-	1,433 00	1,668 55	19,439 07		

* Cannot give an accurate estimate of this section, but I think $5,000 will complete it.
† Cannot estimate accurately, say $10,000. ‡ Side drains. ◊ Final estimate.
a Coffer-dams, foundations, &c. *b* Sundries not to be described. *c* 200 cubic yards of excavation in abutment pits. *d* Levelling foundation of works. *e* 389 cubic yards of excavation in extra drains. *f* 723 cubic yards of side drains.

EXHIBIT No. VI.

REPORT OF JOHN DIXON,

WITH ACCOMPANYING DOCUMENTS.

VANDALIA, *December* 15, 1838.

To the Hon. WILLIAM KINNEY,

President of the Board of Public Works.

The undersigned, acting Commissioner of the sixth judicial circuit, has the honor to report:

That his duties, as such, commenced on the 14th day of August last; previous to which time the grading of twenty miles of the Central railroad, from Galena south, had been put under contract on terms highly favorable to the State, considering the high price of labor and subsistence, compared with other sections of the State. A large portion of the contractors have prosecuted their work with energy. Two, only, have proved faithless—their jobs have been re-let at a small advance above the former price.

A contract for the improvement of the Lower rapids of Rock river was let by my predecessor in May last for the sum of sixty thousand three hundred and eighty-nine dollars—about two thousand dollars over the engineer's estimate; which, with the cost of construction at Prophet's town, estimated by the engineer at twelve hundred and eighty dollars, together with the cost of surveys and incidental expenses properly chargeable to that work, will reduce the appropriation below the cost of construction necessary at the Upper rapids, (see engineer's report herewith submitted,) estimated at $85,295 26. So that the amount properly applicable to that work, under the law, would be inadequate to its completion; in consequence of which, the operations at that place were suspended.

The estimate of the engineer charged with the survey of that river in 1837, is $178,548; therefore, the additional sum of $78,548 will be requisite to complete the whole improvement, and afford the depth of four feet water, at the lowest stage, from the mouth of the river to the State line. By such improvement, 165 miles of navigation will be opened through a country possessing, to an unequaled extent, all the natural advantages calculated to render prosperous and happy a population,

who, for intelligence and enterprize, will compare with those of any other portion of globe.

I regret that it is not in my power, at this time, to give a full detail of operations in this circuit. Much of the information necessary can only be derived through the medium of the chief engineer. A full report from him will unavoidably be delayed for a few days. I must therefore ask the indulgence of the Board, in order that the necessary information may be obtained on which to predicate a full report of all the operations under my charge.

The total amount of expenses since I entered upon the duties of my office, as Commissioner, up to the first day of December inst., as per vouchers on file in the office of the Fund Commissioners, is $48,257 30½. Of this sum, $8,436 25 is charged to the Rock river improvement, and $39,821 05½ to the Central railroad; the liability for a large amount of each had accrued previous to my appointment. The total amount drawn from the Fund Commissioners, up to this date, is $56,152 67½, leaving a balance on hand of $7,895 47.

In consequence of the death of my predecessor before I had an opportunity of seeing him after my appointment, and his executors not having yet qualified (so far as my knowledge extends) I shall not be able to give the necessary information relative to his operations or affairs, which, under other circumstances, should be reasonably expected.

Respectfully submitted.

JOHN DIXON,
Commissioner Sixth Judicial Circuit.

ENGINEERS' OFFICE, *May* 15, 1838

To the Hon. JAMES W. STEPHENSON,
Commissioner of Public Works for the Sixth Judicial Circuit.

SIR: After the completion of the surveys of Rock river, several circumstances prevented me reporting to the meeting of the Board, the result of my examinations and my views, as to the improvement of a river which, by the removal of a few obstructions, will open a free communication with one of the most beautiful portions of the State.

The river is now navigable, in an ordinary stage of water, for boats of three to four feet draft, with the exception of two points, which will require the aid of dams and locks to render them navigable. When the river is at its highest stage, boats that have power enough to overcome a current of seven to eight miles per hour, (which is the velocity of the water at each of these points above mentioned) would find no difficulty in ascending the river as far as the mouth of the Peeketonokee, which might be made a navigable stream with very little expense, and would afford an easy communication with the mineral region. This stage of water, however, lasts but a short time, and comes so early in the spring that it affords no advantage.

My object now is to present to you a brief detail of the state of Rock river in its lowest stages of water, of the different impediments to its navigation, of the mode of improvement, and of the probable cost

to render that river navigable, when in that low stage, from its confluence with the Mississippi to the State line, adjoining Wisconsin, a distance of one hundred and sixty-five miles. The first difficulty to be overcome is the Lower rapids, opposite Rock Island city, about three miles from the mouth of the river. The length of these rapids is three-fourths of a mile, and the total fall in that distance is six and a half feet. About half a mile above the rapids, the river is divided into two branches by a succession of islands. The south branch is from eight to nine hundred feet wide, very shallow, has a rocky bottom, and offers no advantages for improvement. The north branch has the deepest channel, and is contracted in many places to the width of four hundred feet by the bluffs near Rock Island city, on one side, and Vandruff's island on the other, which extends the whole length of the rapids.

The elevation of the banks will admit the erection of a dam sufficiently high to back the water some distance beyond the head of the rapids, and improve the channel at that point. A small dam will also be required across the slough dividing Vandruff's island from another island extending up the river nearly half a mile—the main dam being placed as far down the rapids as the elevation of the bank of the island will permit. A canal of nineteen hundred feet in length will be required to reach the foot of the rapids. The island will be the most favorable place for the canal, the excavation being very easy, and enabling us to have its termination near the deepest channel of the river below.

A guard-lock will be required at the entry of the canal, and a lock of seven and a half feet lift at its termination. The bed of the river at these rapids is formed of calcareous rock, which is found also in abundance on the lower part of Vandruff's island, as well as in Rock Island city; and will, as far as I have been able to ascertain, furnish a good material for the construction of the locks.

The Lower rapids being one of the two most important points of improvement on Rock river, maps, on a large scale, will accompany this report, and will give you a more clear idea of the situation of the rapids, and of the mode I purpose to adopt for their improvement.

Another plan had been suggested—which was to excavate a canal three-fourths of a mile, or the whole length of Vandruff's island, and to dispense with the dam. This mode of improvement, which would appear in itself the most permanent, offers fewer advantages, not only on account of its being more expensive, but because the channel of the river about Vandruff's island is not of a sufficient depth; that the work would be more exposed to the frequent rise and fall of the river, and the State be deprived of the immense benefit of a water-power, created by the dam, on each side of the river.

From the Lower rapids to Prophetstown, the river offers all possible advantages for navigation, having a channel with no less than four and a half feet of water. The width of the river varies from eight to ten hundred feet, and the total fall from Prophetstown to the head of the Lower rapids, a distance of fifty-two miles, is 28.08 feet.

The velocity of the current is three miles per hour. Opposite Prophetstown, for a distance of eighteen hundred feet, the river is more shallow, its deepest channel varying from three to four feet. This por-

tion of the river can be easily improved by means of a brush and gravel wing-dam, one hundred and fifty feet in length and four feet high, from the north side of the river to a little island opposite the village.

From this last place to the foot of the Upper rapids the channel of the river has no less than six feet of water; the velocity of the current averages three and a half miles per hour, and the total fall in that distance, which is twenty miles, is 24.12 feet.

The Upper rapids is the second important point to be improved on Rock river; which, at that place, extends to a width of from one thousand to thirteen hundred feet. The length of the rapids is one mile and a quarter, and the total fall in that distance is 8.24 feet.

The bottom of the river, except at the foot of the rapids, is formed of a sandy calcareous rock of a very smooth surface. The banks of the stream are from twelve to thirty feet high, with the exception of the north bank, which, at the foot of the rapids, is from six to eight feet only.

Two different modes of improvement for these rapids might be adopted, and an estimate of both having been made, I have not hesitated in advising you to adopt the second. I shall give you a brief description of both, and refer you to a map of that portion of the river for a better understanding of those two plans.

The first was to build an embankment in the river the whole length of the rapids, so as to form a canal eighty feet in width, with a lock of 8.24 feet lift at its termination, and without the aid of a dam, obtain the depth of water required at the upper end of the canal by excavating a channel one and a half feet in the rock under the water, for a distance of eight hundred feet, between the embankment and the shore.

The second plan, which is the one I should consider advisable to adopt, is to build a dam as far down the rapids as the bottom of the river and the elevation of the north bank will admit.

The length of this dam will be from nine to ten hundred feet, and its elevation from the bottom of the stream will not exceed ten feet. A canal will be constructed from the dam to the foot of the rapids by an embankment made in the river about two thousand feet in length. The dam will be of sufficient height to raise the water eighteen inches at the head of the rapids, so as to get a sufficient depth of water at that place and avoid the rock excavation under water. This elevation added to the total fall of the rapids, 8.24 feet, will give 9.74 feet, the number of feet lift for the lock at the foot of the canal.

The cost of three-fourths of a mile of embankment, and of the rock excavation under water for a distance of eight hundred feet, for the completion of the first plan, will by far exceed the expense of a dam across the stream—the work would be more liable to damages by freshets and ice in the spring—and the water-power, which will afford a considerable revenue to the State, would be much less, and on one side of the river only.

From the Upper rapids to Rockford, a distance of sixty-three miles, the only obstructions in the river are three moveable sand bars, having, for a very short distance, a depth of water of from two and a half to three feet only. Those bars being formed of quick-sand, may be removed in

a short time by the frequent passage of steamboats. But with the aid of wing-dams, from one hundred and fifty to two hundred feet in length and three to four feet high, the channel can be easily cleared. The width of the river between the two places varies from six to eight hundred feet. The total fall is 69.91 feet, with an average velocity of current of three miles per hour.

Opposite Rockford, for a distance of eight hundred feet, the river is shallow, its deepest water being only two to two and a half feet; the velocity of the current, for that distance, varies from four to five miles per hour. The bed of the river is of solid and smooth rock.

By deepening the channel on the south side of the river and constructing a wing-dam on the opposite side, about two hundred feet in length and four feet in height, to maintain the water at the same level, this obstruction will be removed to the best advantage.

From Rockford to the mouth of the Peeketonokee, the river offers a good channel of no less than four and a half feet of water; its width is from four to five hundred feet, and the fall between the two places, distance twenty miles, is 28.61 feet. About three miles above Peeketonokee, near the foot of the Little island, which occupies the centre of the river, a large rock, measuring from forty to fifty cubic yards, obstructs the best channel, and will have to be removed. Half a mile farther, a wing-dam of one hundred and thirty feet in length, will have to be constructed to remove a sand bar which reduces the channel to two and a half feet water, for a distance of four hundred feet.

One mile from the State line the river varies from three to five hundred feet in width. Its sudden fall, at the rate of four feet per mile, creates a very strong current and a shallow channel from the mouth of Turtle river to a distance of about one thousand feet. On the south side of a large island is the main channel; by the aid of a dam, four feet in height, from the north shore to the island, we shall obtain a depth of water of four and a half feet, with a velocity of current of four and a half to five miles per hour; this will be easily overcome by steamboats.

From the mouth of the Peekenotokee to the State line, the distance is five miles and a half, and the total fall in the river is twelve feet; the velocity of the current averages about three and a half miles per hour. It was my intention to present you with a map of the whole river, with this report; but I have not been able to complete it entirely for want of time, having paid all my attention to prepare the Lower and Upper rapids for contract, according to your directions. This map will be submitted to your examination at the meeting of the Board next December.

The importance of improving the navigation of Rock river—the immense benefit that will be derived from it, as well for the State as for the country, are already known. Any traveller who views any part of this stream, is struck by its beauty—with the fertility of the soil in its vicinity—the general salubrity of the climate, and the rapid increase if its population.

Many flourishing towns are already progressing on Rock river that would now afford business of some importance to several steamboats; and at the rate the population has been increasing for the last two years, the amount of freight to supply the wants of the country will more than tripple every year. There is a peculiar character to Rock river

which distinguishes it from most navigable streams in this country; it is generally confined within its banks, and in high floods it is never obstructed with flood wood, although the land, at its head waters, is well timbered, and will afford an abundant supply of lumber to the country below. In accordance with your instructions, the location of the work for the improvement of the two rapids was done this spring, with plans and specifications for the several portions of the work. For the improvement of the Lower rapids, the ground on Vandruff's island was the most favorable, affording material advantages for the location of the canal, which ware seldom met with. The sinuosity of the bank admits of a straight line for the canal, which is 1,900 feet in length. A bay formed by the bend of the river protects the entry, and its termination connects with the deepest channel of the river. Its width, at the water line, will be eighty feet, and its depth five feet. The lock will be built of stone, with a chamber one hundred and forty by thirty-eight feet, and will admit the passage of boats of the common size running on the Upper Mississippi.

The dam is so be circular, built with crib-work, filled with stone, and supported by two natural stone buttresses, formed by high ledges of rock on each side of the river.

The works at the Upper rapids will be attended with some difficulty; but the locality affords materials to construct a solid and permanent work.

The canal will be formed by an embankment in the river, composed of earth and stone excavated from the bank.

The plans for the lock, guard-lock, and dam, are the same as for the Lower rapids.

Our specifications will give you a minute detail of the work, and the mode proposed for its construction.

Respectfully submitted.

Estimate for the complete improvement of Rock river, securing four feet water from the Mississippi to the State line, a distance of one hundred and sixty-five miles.

LOWER RAPIDS.

21,054 cubic yards of earth excavation, at 20 cents -	$4,210 80
1,061 cubic yards of rock excavation, at 1 dollar -	1,061 00
759 yards of puddling, at 60 cents - - -	455 40
Stone lock, $4,747 23 per foot lift - - -	35,604 26
Guard-lock - - - - -	8,235 30
Circular dam, at $15 52 per foot lineal - -	6,206 25
Dam No 2, at $13 25 per foot lineal - -	2 463 68
Total - - - - -	$58,236 69

Prophetstown.

Wing-dam 160 feet long, at $8 per foot lineal -	$1,280

Upper Rapids.

60,169 cubic yards embankment, at 20 cents - -	12,033 80
4,032 square yards slope-wall, at $1 25 - -	5,040 00
3,210 cubic yards rock excavation, at $1 - -	3,210 00
2,490 cubic yards earth excavation, at 16 cents - -	384 00
Stone lock, 9.74 feet lift, at $4,105 97 per foot -	39,992 16
Guard-lock - - - - -	8,235 30
Circular dam, 1,109 feet long, at $15 per lineal ft.	16,500 00
Total - - - - -	$85,395 26

From Upper Rapids to Rockford.

Wing-dam 140 feet long, at $6 per lineal foot	$840 00
do. 110 feet long, at $6 do. do. -	666 00
do. 150 feet long, at $6 do. do. -	900 00
Total - - - - -	$2,400 00

Rockford Rapids.

1,500 cubic yds. of rock excavation under water, at $2	$3,000 00
Wing-dam 450 feet long, at $7 per lineal foot	3,150 00
Total - - - - -	$6,150 00

From Rockford to the State line.

50 cubic yards of rock excavation under water, at $2 50 - - - -	125 00
Wing-dam 130 feet long, at $6 per lineal foot -	780 00
do. 160 feet long, at same price - -	960 00
Total - - - - -	$1,865 00

Summary Estimate.

Lower rapids, - - - - -	$58,236 69
Prophet's village, - - - - -	1,280 00
Upper rapids, - - - - -	85,295 00
From Upper rapids to Rockford, - - -	2,400 00
Rockford rapids - - - - -	6,150 00
From Rockford to the State line, - - -	1,865 00
Aggregate amount, - - - -	$155,226 95
Add 15 per cent. for engineering and contingencies	23,321 54
Whole total - - - -	$178,548 49

AN ABSTRACT of the survey of Rock river.

Distance in miles.		Fall per mile.	Velocity, in miles, per hour.	Soundings.						Distance requiring improvement.	Mode of improvement.
				Maximum.	Length.	Medium.	Length.	Minimum.	Length.		
From mouth Rock river											
to Lower rapids	3.18	6.51	7¾	10.00	92,932	3.00	1,000	3.00	200	4,800	Canal, dam and lock.
	27.00	.68	3	9.00	140,760	6.50	1,400	5.00	1,800	-	Dam.
Prophet's town	54.14										
	24.24	8.42	7½	9.50	154,355	3.50	4,200	2.00	1,200	5,400	Dam and lock or canal.
Upper rapids	75.38										
	11.86	.98	2¾	9.50	40,306	7.00	21,314	5.00	1,000		
Dixon	88.49										
	13.17	1.38	3	40.50	400	6.50	69,529	4.00	400		
	10.85	1.70	3¾	6.00	48,624	3.50	1,180	3.00	3,600	3,600	Dam.
Oregon	111.36										
	10.10	1.24	2¾	7.50	23,215	6.00	28,191	4.00	1,400		
	9.78	1.39	2½	6.00	37,656	5.00	2,200	3.00	800	800	Dam.
	6.44	1.75	2⅞	6.50	30,512	5.50	2,600	3.00	600	600	Dam.
Rockford	139.00										
	1.50	2.22	3½	7.00	7,070	2.50	350	2.00	400	750	Rock exca'n & dam.
	19.24	1.31	2½	8.00	32,110	5.25	15,410	4.00	50	50	
Peeketonokee	159.22										
	2.50	2.60	2¾	5.00	8,200	5.00	4,200	3.50	800	800	Dam.
	2.00	3.98	3	6.00	5,600	4.50	4,560	2.50	400	400	Dam.
	1.00	4.02	4¼	7.00	1,400	5.00	3,230	2.50	600	600	Dam.
State line	164.50										

Total fall of Rock river within the State, 191 feet.

EXHIBIT No. VII.

REPORT OF EBENEZER PECK,

WITH ACCOMPANYING DOCUMENTS.

VANDALIA, *Dec.* 13, 1838.

To the PRESIDENT
of the Board of Public Works.

Since the June meeting of the Board, the twenty-two miles of the Central railroad in the seventh judicial circuit, previously ordered to be put under contract, have been let, and are rapidly advancing towards completion.

The contracts were for the most part let to efficient men, and at fair prices, and will be completed (except the superstructure) by September next. The contract prices for grading, masonry, &c., as also the quantity of work done can be readily ascertained by reference to the tables accompanying the reports of the principal engineer of the northern district, and the assistant engineer upon the line.

A survey of the upper part of the navigable portion of the Illinois river has been effected, as will be seen by reference to the report of T. B. Ransom, assistant engineer, whose skill and capacity eminently qualify him for the performance of this duty, and to impart the necessary information in connection with this important branch of our labours. By reference to the report of Mr. Ransom filed herewith, full information can be had upon this subject. I would recommend that the improvements upon the Illinois and Rock rivers be placed under the separate control of an engineer.

The connection of the Central railroad with the Illinois river, at the termination of the Illinois and Michigan canal, it will be perceived by reference to the map produced with this report, is upon State land, and has been fixed with a direct view of increasing the value of the State property at this important position. I do not think that I can be charged with exaggeration when I express an opinion that the benefits to be received by the State, by the increased value of the lands at the town of La Salle, will more than overbalance the whole expense of constructing the twenty-two miles of road now under contract at that point.

Should the Board of Canal Commissioners think it expedient, a levee might be raised along the bank of the Illinois river from the termination of the railroad on the south side of the river, extending upwards to the highlands, which would redeem upwards of three hundred acres of valuable land from inundation, and greatly increase its value, at a comparatively small expense. Should this plan be ultimately adopted, the grade of the road across the Illinois bottom at this point might be lowered, and the cost of the road diminished.

It is proper to mention that, as the law directed the roads to be commenced at the navigable streams, and to be worked each way from them, the cost of construction of the roads now under contract will greatly exceed the average cost of the whole line of road to be constructed. This remark applies with peculiar force to that portion of the road placed under contract in my circuit.

The bluffs of the Illinois river are quite bold and difficult of ascent, and the obstruction can only be overcome, on the south side, by ascending through the valley of a creek. By much pains, though at considerable expense, a favorable route has been found, and this difficulty surmounted. The expense of preparing the road for the superstructure is comparatively small. It is believed that the estimate of the cost of the Central railroad, by the Legislature, as far as the northern portion of it is concerned, will be adequate for its completion; some portion of the road under my supervision has already been graded, and made ready for the superstructure, at a cost less than five hundred dollars a mile.

I have received of the public funds since my appointment as Commissioner - - - - - - $38,071 67

Out of which sum I have expended upon the Central railroad - - - - -	$37,091 31	
Upon the Quincy and Meredosia road -	545,00	
For survey of Illinois river - - -	201,02	
		37,837 33
The small balance of - - - - -		234 34

remaining in my hands is insufficient to cover moneys actually expended by me, for which I have unformal vouchers, and to cover some unliquidated accounts contracted by me for the public works; which I shall be able in a few days to adjust with the State.

The reports of the principal and assistant engineers accompanying this will furnish full, and, I trust, satisfactory details of the business of the seventh circuit entrusted to my charge.

It is to be hoped that neither the malevolence of party, the pride of opinion, the bitterness of personal enmity, or any unfortunate spirit of demagoguism, will be permitted to triumph over the public good, so far as to interrupt the onward march of our State in her internal improvements; the good fruits of which are already perceived in the sales of her produce, in the advanced price of her estates, and, above all, by a large accession of enterprising and intelligent population. The advantages of these can not be lessened by any carpings about the price of chickens, or the ambitious aspirations of lovers of office.

E. PECK.

Report of H. P. Woodworth.

JUNE 25, 1838.

To E. PECK, Esq.

Commissioner of Public Works, Seventh Judicial Circuit.

SIR: Agreeably to your instructions, I have located, and prepared for contract, twenty-two miles of the Central railroad; and in compliance with the 12th article of the internal improvement act, I have the honor of laying before you the following report upon the same, accompanied with all the necessary maps, profiles, plans and estimates.

In locating and preparing for contract that portion of the Central railroad extending eleven miles each way from the Illinois river, which was ordered to be put under contract by the Board of Public Works at their meeting in December last, I first directed my operations upon the north side of the river. I had previously ascertained that by far the most favorable point for crossing the river was a short distance below the termination of the Michigan canal; and I deemed it a matter of importance that the termination of the line or depot should be located so as to secure a ready access to this point, whereon appropriations should be made for continuing the line of road across the river. Two locations have presented themselves, which seem equally to secure the above object, to wit, the one on the bottom, and the other on the bluff. The advantages and disadvantages of each of these locations were carefully considered, and the facilities of gaining a road-way from either to the prairie were thoroughly and accurately examined. In the result, many weighty reasons were found in favor of a location on the bluff. I have therefore commenced the line on section 15 (State property) about 500 feet from the steamboat basin. From this point the river can be approached on an inclination of less than sixty feet per mile. A railway can be extended, at a small expense, to any point on the basin, whenever increase of business shall suggest such a facility for the transfer of freight.* From this point the road is located in Broad street for a distance of 1,600 feet. It then becomes necessary, to conform to the direction of a ravine up which the line passes, to deflect on a curve of 5,750 feet radius. After gaining the high prairie, the line again deflects on the same radius. For the purpose of curving into a tangent, the line is continuous to the end of the location.

The first two sections contain some heavy cutting, and, for a distance of three thousand feet, a grade of 95 feet to the mile. But as the heavy transportation will naturally be towards the river and canal, this grade for so short a distance cannot be considered as being very objectionable. From the commencement of section three, the line passes over a smooth undulating prairie, with easy grade and little excavation or embankment until reaching Spring creek. There a bridge 30 feet span will be necessary; stone abutments and truss frame are recommended. From this onward, the country over which the line passes is again high and rolling; four culverts only will be required in the whole distance, and those are proposed to be simple box culverts of dry stone masonry. Turn-

* The location through La Salle has been so improved as to give but one curve.

outs, road-crossings, watering stations, &c., can all be located to very good advantage. Building materials must be conveyed from the river and bluffs, where good and suitable stone for masonry are easily obtained. A superior quality of timber for superstructure and other wood work can be obtained from neighboring groves, and at a distance of not exceeding ten or twelve miles.

For the topographical features of the country through which the line passes, and a more definite idea of the location, I would refer you to the accompanying maps and profiles. (See maps, &c.)

On account of high waters, the operations were not commenced on the south side of the river until late in April, when a party was organized and put under the immediate charge of Gen. T. B. Ransom. The route of the line lay up the valley of Cedar creek, and was well defined; but, on account of a variety of circumstances and considerations, the location has been tedious and very difficult. A good line, however, has been obtained; for a description of which I am happy to refer you to the accompanying communication I have received from Mr. Ransom. (See Ransom's reports and accompanying maps, plans, profiles, &c.)

In conclusion, I will remark that the valley of the Illinois river is about 200 feet below the high prairie, and is generally bounded by abrupt bluffs of from 70 to 120 feet in height; hence the great difficulties to be overcome, and disproportionate expense of the first few miles from the river. The prairie once gained, and all difficulties vanish, and the expense of graduation becomes comparatively trifling.

Most respectfully submitted.

H. P. WOODWORTH, *Engineer.*

Table of Grades and Distances for eleven miles of the Central Railroad, from the Illinois river north.

Location.	Stations. From	to	Distance from La Salle.	Length of each grade.	Ascent per mile.	Descent per mile.
			Feet.	*Feet.*		
Commencing on edge of bluff, La Salle - -	0	5	500	500	Level	
On prairie - - -	5	64	6,400	5,900	104.504	
Do. - - -	64	78	7,800	1,400	11.088	
Do. - - -	78	135	13,500	5,700	9.504	
Do. - - -	135	235	20,500	10,000	1.637	
Do. - - -	235	326	32,600	9,100	9.134	
Do. - - -	326	355	35,500	2,900	–	15.787
Do. - - -	355	360	36,000	500	Level	
Do. - - -	360	385	38,500	2,500	31.938	
Do. - - -	385	420	42,000	3,500	22.890	
Do. - - -	420	440	44,000	2,000	–	.159
Do. - - -	440	495	49,500	5,500	16.896	
Do. - - -	495	581	58,080	8,580	12.145	

Table of Curves, Tangents, and Elevations.

Location.	Stations. From	to	Distance from La-Salle.	Length of particu-curve or tangent.	Tangent or curve.	Radii.	Distance above.
			Feet.	*Feet.*			
Commencing at La Salle	0	77	7,700	7,700	Tangent		
On prairie - -	77	105	10,500	2,800	Curve	5,804	120.47
Do. - -	105	581	58,080 or 11 m's	47,580 –	Tangent "	– –	125.86 208.22

Report of T. B. Ransom.

ENCAMPMENT, No. 1,
Cedar Creek, June 25, 1838.

To H. P. WOODWORTH,
Chief Engineer of Northern Engineering District.

SIR: In accordance with your request of June 18, I herewith present the result of my field examinations and location of the Central railroad, from the Illinois river, opposite La Salle, through the valley of Cedar creek, to a point on the Grand prairie, near Walnut grove, embracing a distance of eleven miles. Maps, profiles, and estimates of the located line, also accompany these remarks.

In consequence of the backwardness of the season, and the unusually high floods of the Illinois river and Cedar creek, our operations in the field have necessarily been much retarded; though it is, perhaps, fortunate for the interests of the State that the unusual rise of these waters occurred at this time, since they have probably made known the extent of the evils we have to guard against.

GENERAL FEATURES.

The Illinois bottom, over which our line passes for nearly one mile and a half, is a rich, compact, vegetable alluvion, of many feet in depth, underlaid, and running into a formation of clay and sand as we approach the bluff. During high floods, this bottom is not unfrequently submerged to a depth of ten feet.

The first mile from the river is over a beautiful open meadow; the remaining distance on the bottom, as well as the slope of the bluff, is covered with a heavy growth of valuable timber.

Cedar creek empties itself into an arm of the Illinois, amid this timber, about one-half of a mile from its gorge in the bluff. It is a small stream, though subject, at times, to very high floods; its valley is a deep cut-off, from one to two hundred feet, into the edge of the prairie, exceedingly serpentine and rugged, and varying from 200 to 500 feet in breadth. Bold bluffs and ridges of more than 100 feet in elevation interlock in some places along the valley, while the stream winds around their bases.

These bluffs are subject to heavy "slides;" their geological formation, therefore, is easily determined; their tops have usually a thin soil, running into sand and clay, to a depth of from 10 to 20 feet; we then come to strata of limestone, and partially cemented clay, alternating. The strata of stone vary from 1½ to 3 feet in thickness, with numerous vertical cross seams; and the lower stratum, in particular, will be very valuable, convenient, and, I doubt not, sufficiently abundant for the structure of the necessary bridges and culverts along the road already located, though it is believed that the grade line will not fall below the second stratum.

Strata of bituminous coal of an excellent quality are also found at several points along this valley; this will also be of some importance to the interests of the State, whenever the road is completed.

As we ascend the valley, the bluffs on either side become less bold and irregular; and above Manvill's mills, the stone formation entirely disappears. A variety of excellent timber, suitable for the superstructure of the road, is found along the creek for about four miles from its mouth; at which distance we arrive at the prairie, the topography of which is well known. Here the creek separates into smaller streams, with gradually sloping banks, their beds being but slightly depressed below the general level of the prairie, which, at a distance of five miles from the Illinois, is 232 feet above its surface at low water.

From the head waters of these streams, an even unbroken prairie extends for many miles beyond the limit to which our prescribed distance of 11 miles will carry us.

Particular Location of Line.

The line commences on the south bank of the Illinois river, opposite to the termination of the Michigan and Illinois canal, and runs, in the best direction attainable, for the gorge of Cedar creek at the bluff. In order to be secure against the floods of the river, and also to ease the grade in ascending along the curve in the valley of the creek, a very heavy embankment is necessary across the bottom of the Illinois.

Observation has shown that, during the floods of the river, large trees, ice, &c., are carried with much force over this bottom. With a view to protect the embankment from the action of these masses, I would suggest that an embankment be constructed along the immediate bank of the river, from the point where the railroad line strikes the river to the bluff, a distance of about a mile, and along the highest ground upon the bottom. A large portion of this meadow would thus be secured against the floods, and consequently very much enhanced in value. As this point, from its local situation and other circumstances, cannot fail of being one of much importance, I cannot but believe that the State will be amply compensated for the extra expense of the work above noticed, by the greatly enhanced value of the State lands upon which they will thus be constructed.

The railroad embankment, thus protected, may also safely be of less elevation and strength than would otherwise be admissible. A superstructure secured upon piles would, however, save much of the immediate expense.

Before making the bluff, the line crosses Cedar creek about 80 feet from its entrance into the arm of the Illinois, and recrosses it again 2,100 feet from the former point. Bridges of about 80 feet span each, with expensive abutments, would be necessary to pass these points. But I would propose to make a cut of about 200 feet, by means of which the creek can be turned into the river below its present mouth, and thus save the expense of these works.

After leaving the embankment on the Illinois bottom, three heavy bluffs are encountered on a curve of 2,729 feet radius; the two first of which are on the east, and the other on the west bank of the creek.

The heavy embankment along the bottom will require much more earth than the amount of excavation which these bluffs will afford, with the slopes allowed on other parts of the work; their slopes can, therefore,

be so much reduced by taking the excess of bank from them, that no danger need be apprehended from slides upon the road, that otherwise could not be well avoided.

For the grades, curves, culverts, and bridges, I would refer you to the tables herewith presented, as well as for the estimates upon different parts of the work.

After passing the third bluff, it will be seen by reference to the profile and map, that from that point to Manvill's mills, three high bridges, with rather heavy embankments, are required. The grade line along this portion of the road might have been laid somewhat lower, and thus have saved expense, but for the necessity of continuing the grade below, in order to reach the edge of the plane at the latter place, which is already cut as deep as is considered safe, on account of rock excavation.

The line passes the creek at bridges, Nos. 1, 2, and 3, very favorably, and the location of bridge No. 4, would have been much improved by throwing the tangent on which it is placed further to the north; but this would have injured the location of bridge No. 3, and very much increased the amount of embankment; as it is situated, the creek must be turned for a short distance, to be passed in a more favorable manner, and a slope wall, of about 170 feet in length, will be requisite.

The next point of any considerable importance is at bridge No. 5, which, however, spans the creek at a very favorable point, and will be less expensive than either of the preceding ones. The deep cut through the ridge, near bridge No. 5, is resorted to, in order (as will be seen by reference to the map) to save excessive embankment and enlarge the radius of the curve at that point.

The line passes and repasses the creek again, near stations 193 and 198, respectively; but bridges at these points will be obviated by making a short cut of about 280 feet in length, and about 20 in depth, by means of which the creek may be turned through the ridge, on the east of the line, and thus save the expense of two bridges at these points. It should be remarked, also, that the ridge above mentioned is a formation of sand and clay easily excavated.

The only points of importance on the remaining part of the line, are the cut, bridge No. 6, and the embankment at or near Richey's. If the line be placed further east, to avoid the deep cut just noticed, a much longer and heavier embankment in the valley will be necessary than is requisite on the present line, as well as a re-curve to gain the proper direction.

The high bridge and embankment are necessary in order to maintain the elevation already attained and pass on to the prairie with an admissible grade.

After leaving this embankment, we strike the open prairie, and leave the valley of Cedar creek and its branches to the right. From this point the line traverses an almost level prairie, without an obstacle worthy of notice, to its southern limit.

It will be seen that the first six sections contemplate a variety of heavy and expensive work; yet, considering the height to which the floods rise on the Illinois bottom, and the consequent necessary height of the embankment that traverses it—the winding and rugged character of Cedar creek valley—and the great elevation to be overcome in a

short distance, I cannot but believe that the grades and curves of the proposed line are as favorable, and the aggregate expense of the whole as light as could have been anticipated under these circumstances. Indeed, it will be seen that the elevation of the prairie is attained upon grades and curves that admit of motive power, as the agent, without diminishing, in any considerable degree, the velocity or weight of the bodies to be transported.

I regret that time does not permit me to present more finished maps and drawings, as well as a more perfect exposition of the topography of the country, and the various works required along the located line; but as you are well aware of this fact, the above remarks are respectfully submitted, without further comment, by

T. B. RANSOM.

Table of Curves, Tangents, and Elevations.

Location.	Station. From	to	Whole distance from Illinois river.	Length of particular curve or tangent.	Tangent or curve.	Radii.	Distance above or below high water in Illinois river. Above.	Below.
			Feet.	*Feet.*				
Commmencing at Ill. river	0	25	2,500	2,500	Tangent	–	–	11.94
On bottom	25	45	4,500	2,000	Curve	7,640	–	11.90
Mouth of Cedar creek	45	54	5,400	900	Tangent	–	–	10.42
On timber bottom	54	112	11,200	5,800	Curve	27.29	67.00	10.42
On Point Bluff	112	134	13,400	2,200	Tangent	–	95.05	
Near Manvill's	134	190	19,000	5,600	Curve	2,645	135.42	
On bank of creek	190	193	19,300	300	Tangent	–	129.08	
On bank of creek	193	210	21,000	1,700	Curve	3,970	179.57	
On high ground	210	236	23,600	2,600	Tangent	–	153.56	
Near Richey's	236	282	28,200	4,600	Curve	55.45	211.10	
On prairie, 100 ft. from com't	282	430	43,000	14,800	Tangent	–	223.44	
Opposite Binbuy's Point	430	502	50,200	7,200	Curve	20,304	221.92	
On prairie - -	502	580	58,000	7,800	Tangent	–	235.90	

Table of Grades and Distances.

Location.	No. of grade.	Station. From	to	Whole distance from Illinois river.	Length of each grade.	Ascent per mile.	Descent per mile.
				Feet.	*Feet.*		
Commencing at Illinois river	1	0	50	5,000	5,000	Level.	
Near Manville - - -	2	50	150	15,000	10,000	53.93	
On prairie, 1,000 ft. from timb.	3	150	265	26,500	11,500	41.707	
On prairie - -	4	265	310	31,000	4,500	12.82	
On prairie - -	5	310	430	43,000	12,000	3.66	
On prairie - -	6	430	475	47,500	4,000	–	18.45
On prairie - -	7	475	500	50,000	2,500	31.908	
On prairie - -	8	500	581	58,080	8,080	8.308	

Estimates of the probable expense of the grading and masonry on 11 *miles of the Central Railroad south of the Illinois river.*

Section 1.

63,575.65	cubic yards embankment, at 30 cents per yard	$19,072 50
4,444	cubic yards protection wall, at $1 50	6,666 00
		25,738 50

Section 2.

6.43	acres clearing and grubbing, at $30 per acre	$192 90
125,482	cubic yards embankment, at 25 cents -	31,370 50
8,963.54	cubic yards excavation, at 16 cents -	1,434 16
150	cubic yards masonry, at $5 - -	750 00
	For turning channel of Cedar creek - -	150 00
		33,879 56

Section 3.

5.5	acres clearing and grubbing, at $25 -	$137 50
58,630.94	cubic yards excavation, at 20 cents -	11,726 18
87,757.83	cubic yards embankment, at 16 cents -	14,041 25
1,528	cubic yards masonry, at $6 - -	9,168 00
100	cubic yards masonry, in culvert, at $5 -	500 00
33	cubic yards slope wall, at $1 50 - -	49 50
		35,622 43

Section 4.

3.12	acres clearing and grubbing, at $20 -	$62 40
8,637	cubic yards excavation, at 20 cents -	1,727 40
11,901	cubic yards embankment, at 14 cents -	1,666 14
1,511	cubic yards masonry, at $6 - -	9,066 00
62	cubic yards slope wall, at $3 - -	186 00
		12,707 94

Section 5.

2.5	acres clearing and grubbing, at $20 -	$50 00
19,262	cubic yards excavation, at 14 cents -	2,696 68
16,141	cubic yards embankment, at 16 cents -	2,582 40
38	cubic yards masonry in culverts, at $5 -	190 00
		5,519 08

Section 6.

7	acres clearing and grubbing, at $20	$140 00
43,480	cubic yards excavation, at 16 cents	6,956 80
16,324	cubic yards embankment, at 16 cents	2,611 84
550	cubic yards masonry, at $6	3,300 00
		13,008 64

Section 7.

1,263	cubic yards excavation, at 16 cents	202 08
2,526	cubic yards embankment, at 16 cents	404 16
		606 24

Section 8.

1,732	cubic yards excavation, at 16	$277 12
6,808	cubic yards embankment, at 16 cents	1,089 28
73	cubic yards masonry, at $6	438 00
		1,804 40

Section 9.

87	cubic yards excavation, at 14 cents	$12 18
11,926	cubic yards embankment, at 14 cents	1,669 64
50	cubic yards masonry, in culvert, at $7	350 00
		2,031 82

Section 10.

79	cubic yards excavation, at 14 cents	$11 06
3,499	cubic yards embankment, at 14 cents	489 68
		500 92

Section 11.

1,058	cubic yards excavation, at 14 cents	$148 12
3,154	cubic yards embankment, at 14 cents	441 56
		589 68

Section 12.

1,356	cubic yards excavation, at 14 cents	$189 84
3,917	cubic yards embankment, at 14 cents	548 38
		738 22

Section 13.

660	cubic yards excavation, at 14 cents -	$92 40
3,277	cubic yards embankment, at 14 cents -	458 78
		551 18

Section 14.

22,764	cubic yards embankment, at 14 cents -	$3,186 96
70	cubic yards masonry, at $7 - - -	490 00
		3,676 96

Section 14½

26	cubic yards excavation, at 14 cents - -	$3 64
3,743	cubic yards embankment, at 14 cents -	524 02
		527 66

Total cost of sections - - - -	$137,523 23
Add for 76 yards masonry on section 12, at $7 - -	532 00
For 40 yards protection wall on section 4, at $1 50 -	60 00
For turning channel of Cedar creek on section 5, to save two bridges - - - - -	250 00
For drains and ditches - - - - -	400 00
Total for grading 11 miles of railroad - - -	138,765 23
Add 10 per cent for contingent expenses - -	13,876 52
Total cost - - - - - -	$152,641 75
Average cost per mile - - - - -	$13,876 22

The above estimate is believed to be sufficiently liberal to cover the expense of bridge and culvert pits, as well as all necessary drains and ditches.

Respectfully submitted, by

T. B. RANSOM, *Engineer.*

Report of T. B. Ransom.

RAILROAD OFFICE,

La Salle, Nov. 25, 1838.

To E. PECK, Esq.

Commissioner of the Board of Public Works.

SIR: The following summary remarks, descriptive of the commencement of and progress in grading the twenty-two miles of the Central railroad put under contract, at La Salle, on the 25th June last, with the other papers herewith presented, it is believed will be sufficient to exhibit all of the important facts connected with the operations on the public works at this place.

Within thirty days after the contracts were executed (for grading) the work was commenced in a suitable manner upon each contract along the line; but owing to the unusual degree of sickness of this season, and the consequent difficulty, if not impossibility, of procuring and keeping a requisite number of hands, its progress has been very much retarded; so much so that, upon the heavy jobs, there are good reasons to doubt the ability of the contractors to complete their work within the time specified in their agreement with the State.

The work is divided into sections of four thousand feet each, and numbered from the Illinois river each way.

The eleven miles upon the north side of the river was put under the immediate charge of H. K. Curtis, Esq., and the same extent of road on the south side under the immediate charge of C. D. Woodworth, Esq.; both of whom (as well as the young gentlemen generally who have composed these parties,) I take great pleasure in stating, have discharged their respective duties in a manner creditable to themselves, and beneficial to the interest of the State.

Messrs. Kenedy and Brookin's job, embracing sections Nos. 1 and 2 on the north side of the river, and section 7 on south side, has been commenced on section 1, which is now in progress. In the deep cut on this section, (requisite in ascending to the prairie from La Salle city,) at a distance of about three feet under the surface, the material is found to be mostly a semi-formed argillaceous slate in their horizontal strata, and very tenacious; this same formation is also found on the opposite side of the river at the same elevation; It is therefore probable that it underlays the country to a very considerable extent. A stratum of iron ore has also been discovered near the surface on this section, varying in value probably from 30 to 70 per cent; and as the earth will doubtless be graded here below the stratum in building the city, it may ultimately be of some importance to the State.

One or two strata of bituminous coal have also been found here, and on the opposite side of the river, though, so far as they have been traced, they are of inconsiderable value. Mr. Bigalow's job, which embraces the sections from 2 to 14½ inclusive on the south side, has been commenced and executed so far in a very neat and workmanlike manner. The industry which has here characterised his work gives promise that it may be completed within the time specified in his contract. Sections

2, 4, 5 and 6 are completed, as well as the culverts on sections 4, 5 and 6. Several other sections embraced in his contract are also well advanced. From the work already done, it will be seen that the expense of grading the prairie sections does not differ materially from the original estimate.

I ought not disguise my belief that the ditches for the excavated part of the work will be found insufficient, especially as the grade line in some places is so much below the general level of the prairie; for if the superstructure comes at or near the surface, upon whatsoever plan it may be constructed, it will be necessary to have the road-bed well drained.

Sections 1, 2, 8, and 9, on the south side of the river, are under contract to Cronkhite and Doolittle; of which section 2 is chopped, and the grading commenced at the point where the embankment crossing the Illinois bottom strikes the bluff.

Although the strata and different substances which compose these bluffs are such as stated in my former communication, it is found that the deeper they are penetrated, the more firm and solid they become; and, of course, the difficulty and expense of the excavation will be enhanced in the same proportion; indeed, some of these strata have all the hardness and tenacity of solid rock; this will necessarily increase the expense of grading at these points, and probably bring the aggregate expense somewhat above the estimate of last spring.

The grade line across the Illinois bottom was laid under the expectation that an embankment would be thrown up along the bank of the river from the termination of the railroad embankment to the bluff; thus securing several hundred acres of very valuable land from the action of the floods. If this is not done, the railroad embankment will require to be at least two feet higher than was then contemplated, and a broad water-way be left at some appropriate place, to prevent the damaging and accumulation of water during floods, which it must be seen will be caused by the canal and railroad embankments; which, as they extend to the bluffs on either side of the river, will operate to raise the floods on the upper side of these embankments, where formerly they swept freely over this broad span, to the height of at least ten feet, and force them with an increased velocity along the main channel of the river, and through such other passages as may be left open to their course.

It will be seen also by reference to the maps, that the railroad line being a little below, and making out a small angle with the embankment of the steamboat basin, or termination of the canal; and the channel of the river turning to the right in passing down between them, the floods will necessarily throw floating ice, trees, &c., directly upon the railroad embankment, which would be prevented by a bank along the south side of the river; this bank would also gradually turn the current above in a direction to pass around the termination of the railroad line.

A proper security to this point by means of piles and slope wall will be requisite. Instead of the latter, however, to protect the embankment along the bottoms, should the plan of constructing one along the river be abandoned, I would propose that small brush in suitable quantities be interwoven with each other and embedded in horizontal strata in the embankment while it is being constructed, and that the slopes be further protected by planting upon them in fall or spring the Bermuda grass,

or the common turf of the prairie. I have known this kind of embankment to resist the action of water, ice, &c. better than the ordinary slope wall; and the expense of this kind of protection is evidently much less than the former.

Sections 3, 4, 5, and 6, have been commenced in a very efficient manner by Perry, Wilson & Co. The third section has three bridges and the deepest cuttings on the work. The remarks made in reference to the material to be excavated on section 2 will also apply to the material in the deep cuts in the bluffs on this section. Between this point and the prairie, as the grade ascends rapidly, it is believed that no material will be found so difficult to remove as that encountered in the several strata below.

Stone of the first quality for the bridge abutments, and of any desirable dimensions, is found here in the most advantageous situations for these works; all such as are valuable for building purposes, and not required in the work, are reserved along the line, to be disposed of as the interests of the State may require.

The abutments of bridge No. 1 are well advanced, one being nearly completed. It is but justice to the contractors engaged upon these sections to remark that their masonry, thus far, will compare in neatness and stability with any work of the kind in the country. To one unacquainted with the high floods of Cedar creek, the dimensions of the bridges proposed for the railroad, and the character of the abutments in progress along its valley, would doubtless appear to be a worse than useless expenditure of public money. But when it is known that although its bed may even be dry in summer, yet the volume of its water in the spring and fall is not unfrequently equal to the ordinary volume of the Illinois river, and that it falls more than 200 feet in a distance of four miles, bringing along stones, gravel, trees, &c. the necessity of permanent works, and a liberal water-way, will doubtless become apparent.

It is true that the work on the first four and a half miles from the river is bold and expensive; and in consequence of the unexpected character of the material found in penetrating the bluffs, the estimated expense will be somewhat enhanced; still, when it is considered that an elevation of more than 200 feet is overcome in that distance without the aid of stationary power, in a good direction, with grades not exceeding 53 feet per mile, and upon curves of a liberal radius, I cannot but believe that this obstacle will be considered overcome as facile, and at an expense full as moderate as could have been anticipated.

I ought not to omit to mention here my belief that a suitable boat, with a railroad track along its deck to suit the work, and proper appendages at the terminations of the embankments on either side of the river to accommodate the rise and fall of the water, can be arranged and completed at a small expense, so as to carry a train of cars across the river with very little delay and in perfect safety.

In this event, and I doubt not in any event, works analagous to those now in progress on the south side of the river for ascending from the bottom to the prairie, will not only be very desirable on the north side also, but indispensably necessary.

A synopsis of the work already done, and to be done, on this part of the Central railroad is herewith presented.

Respectfully.

T. B. RANSOM.

SYNOPSIS of work done on eleven miles of the Central Railroad from the Illinois river south, up to the 1st *December*, 1838.

No. of sections.	Clearing and grubbing.	Cubic yards common earth excavation.	Price per yard.	Amount.	Cubic yards cemented clay excavation.	Price per yard.	Amount.	Cubic yards solid rock excavation.	Price per yard.	Amount.	Cubic yards quarried rock excavation.	Price per yard.	Amount.	Cubic yards rough masonry.	Price per yard.	Amount.
2	$180 00	1,657.4	16	$265 18	1,764.2	40	$705 70	168.89	$1 25	$211 11	186.91	75	$219 55			
3	31 25	5,205.6	16	832 90	4,051,4	35	1,417 99	203.65	1 12½	229 10	591.04	62½	369 62	102.73	$4 00	$212 92
6	150 00	525.	19	99 75												
8	Prairie	7,834.3	14	1,096 81	702,4	30	270 01	–	–	–	–	–	–	73.17	8 00	585 32
	$361 25	–	–	$2,294 64	–	–	$2,393 70	–	–	$440 21	–	–	$589 17	–	–	$798 24

SYNOPSIS—Continued.

No. of sections.	Cubic yards dressed masonry.	Price per yard.	Amount.	Cubic yards carrying, per 100 feet.	Price per yard.	Amount.	Miscellaneous Expenses.	Amount.	Total amount.	Discount reserved.	Total amount.
2	–	–	–	3080.4	5	$154 02	For turning channel into Cedar creek -	$138 07	$1,873 63	$284 12	$1,589 51
3	473.39	$5 25	$2,485 26	2412.4	2	48 24	For excavation abutment and culvert pits -	369 17	5,965 20	894 78	5,070 42
6	–	–	–	–	–	–	- - - - -	–	249 75	37 46	212 29
8	–	–	–	–	–	–	Ditch from culvert, 14.04 cubic yards -	1 96	1,954 10	323 27	1,630 83
			$2,485 26	–	–	$202 26	- - - - -	$509 20	$10,042 68	$1,539 63	$8,503 05

SYNOPSIS of work to be done on eleven miles of the Central Railroad, from the Illinois river south.

No. of section.	Grubbing and clearing.	Cubic yards excavation.	Price.	Amount.	Cubic yards embankment.	Price.	Amount.	Cubic yards rough masonry.	Price.	Amount.	Cubic yards dressed masonry.	Price.	Amount.	Total amount.	Remarks.
			c			*ct*									
1	–	63,575.65	18	$11,443 61	*	–	–	–	–	–	–	–	–	$11,443 61	
2	$70 00	130,668.3	16	20,906 92	–	–	–	150	$5 00	$750 00	–	–	–	21,656 92	
3	218 75	136,336.70	16	21,813 87	–	–	–	–	–	–	22,766	$5 25	$11,952 20	33,984 82	
4	75 00	20,538.8	16	3,286 20	–	–	–	–	–	–	921	5 75	4,295 75	7,581 95	
5	300 00	35,402.9	17	6,018 49	–	–	–	75	4 50	337 50	–	–	–	6,355 99	For turning channel to Cedar creek, $250.
6	150 00	59,279.5	19	11,263 10	–	–	–	40	4 50	180 00	700	6 25	4,375 00	15,818 10	
7	Prairie.	3,789.7	16	606 35	–	–	–	–	–	–	–	–	–	606 35	
9	"	12,013.6	14	1,681 90	–	–	–	50	8 00	400 00	–	–	–	2,081 90	
10	"	79.33	14	111 06	3,498.9	14	$489 50	–	–	–	–	–	–	600 56	
11	"	1,058.1	14	148 13	3,154.7	14	441 65	–	–	–	–	–	–	589 78	
12	"	10,356.3	14	1,449 88	3,917.2	14	548 41	76	6 00	456 00	–	–	–	2,454 29	
13	"	660.	14	92 40	3,277.3	14	458 82	–	–	–	–	–	–	551 22	
14	"	–	–	–	22,764.	14	3,186 96	70	6 00	420 00	–	–	–	3,606 96	
14½	"	26.065	14	3 64	3,743.6	14	524 10	–	–	–	–	–	–	527 74	
														250 00	Creek channel.
	$813 75	–	–	$78,825 55	–	–	$5,649 44	–	–	$2,543 50	–	–	$20,622 95	$108,111 29	

*All bids from section 1 to 10 are for excavation and carrying earth.

SYNOPSIS of work to be done on the eleven miles of the Central Railroad, from the Illinois north, December 1, 1838.

No. of section.	Cubic yards excavation.	Price.	Amount.	Cubic yards embankment.	Price.	Amount.	Cubic yards dry masonry.	Price.	Amount.	Total amount.	15 per cent. discount.	Total amount paid.
		cts.			*cts.*							
1	159,004.6	20	$31,800 92	748.5	20	$149 70	40	$3 50	$140 00	$32,090 62	$4,813 59	$27,277 03
2	62,537.5	20	12,507 50	188.5	20	37 70	13.6	3 50	47 60	12,592 80	1,888 92	10,703 88
4	–	–	–	274.1	15	41 11	–	–	–	41 11	6 16	34 95
5	–	–	–	912.5	15	136 87	–	–	–	136 87	20 53	116 34
6	40.5	13	5 26	615.5	15	92 33	–	–	–	97 58	14 64	82 94
7	197.1	13	25 62	4,219.0	15	632 94	–	–	–	658 56	98 78	559 78
8	3,108.5	13	404 10	1,867.1	15	280 06	–	–	–	684 16	102 62	581 54
9	764.4	13	99 37	13,500.1	15	2,028 51	87.5	6 00	525 00	2,662 68	399 40	2,263 28
10	2,253.4	13	292 94	5,697.9	15	848 18	23.4	6 00	140 40	1,274 52	191 17	* 1,083 35
11	42.5	13	5 52	6,077.4	15	911 55	49.5	6 00	297 00	1,214 07	182 11	1,031 96
12	1,674.4	13	217 67	3,320.5	15	498 07	15	6 00	90 00	805 74	120 86	6,845 88
13	3,033.6	13	374 76	8,265.0	15	1,239 84	60.4	6 00	362 40	1,977 00	296 55	1,680 65
14	3,433	13	446 29	980.7	15	148 45	20	6 00	120 00	714 74	107 21	607 53
14½	748	13	97 24	458.5	15	68 77	–	–	–	166 05	24 90	141 11
										$55,116 46	$8,267 44	$46,849 02

*Masonry in bridge, .750 yards, at $6.

SYNOPSIS of work done on eleven miles of the Central Railroad, from the Illinois river north, up to December 1, 1838.

No. of sections.	Clearing and grubbing.	Cubic yards excavation.	Price.	Amount.	Cubic yards embankment.	Price.	Amount.	Cubic yards cement clay, gravel, &c., excavation.	Price.	Amount.	Cubic yards dry masonry.	Price.	Amount.	Amount of miscellaneous expenses.	Total amount.	15 per cent. discount.	Total amount paid.
			ct			*ct*			*ct*								
1	$20	3,699.8	20	$739 96	271.8	20	$54 36	5,076.5	40	$2,030 60	–	–	–	–	$2,824 92	$423 74	$2,401 18
3	–	1,914.7	13	248 91	251.7	15	37 75	–	–	–	–	–	–	*$15 21	301 67	45 25	256 42
4	–	1,161.2	13	151 32	8,277.7	15	1,240 65	–	–	–	–	$6	$757 20	†29 01	2,178 18	326 72	1,851 46
5	–	1,067	13	138 71	3,393.7	15	509 05	–	–	–	38.8	6	232 80	‡92 00	972 56	145 88	826 68
6	–	532.3	13	69 20	3,215.5	15	482 32	–	–	–	23.4	6	140 40	–	757 81	113 67	644 14
7	–	–	–	–	1,600.	15	240 00	–	–	–	37.8	6	226 80	‖65 89	466 80	67 02	379 78
8	–	–	–	–	1,731.8	15	259 77	–	–	–	31.4	6	188 40	–	448 17	67 22	380 95
				$1,348 10	–	–	$2,823 90	–	–	–	–	–	$1,545 60	$202 11	$7,930 11	$1,189 50	$6,740 61

* 117 yards ditching, at 13 cents. † 223.2 yards ditching at 13 cents. ‡ Turfing on sections 3, 4, and 5. ‖ 223.2 yards side ditches, on section 4, at 13 cents.

Report of T. B. Ransom.

RAILROAD OFFICE,
Manville, November 28, 1838.

To E. PECK, Esq.
Commissioner of the Board of Public Works.

SIR: On the first of this month an engineering party of five was organized and put under the immediate charge of Wm.H. Seymour, Esq., for the purpose of making surveys and examinations of the bars and other obstructions to the navigation of the Illinois river, from the termination of the Illinois and Michigan canal to the south line of the northern engineering district.

Although the season was far advanced, it seemed a favorable time for a reconnoissance of the kind, on account of its unusual drought and the consequent shoal water of the river. A suitable boat was procured, and the field operations prosecuted with the utmost diligence and industry; but in consequence of the severity of the weather from the 13th to the 20th instant, the river was frozen over, which, combined with the snow, rendered the soundings and further examinations for the time impracticable. The examinations up to this time had, however, extended to all the obstructions between La Salle and Peoria.

The valley of the Illinois river is a deep cut, varying from 200 to 300 feet, into the rich and luxuriant prairie country through which it passes; and, in ages past, was evidently the outlet of a much greater volume of water than is now found within its banks. Indeed, it can hardly be doubted that at least a portion of the drainage of the northern lakes passed through this valley to the gulf of Mexico. Very low grounds and numerous lagoons are frequently found extending, longitudinally, on either side of the river.

For the volume of water that it now passes, it is unusually deep and clear, with a current so very sluggish as to afford but little resistance to the ascent of boats of any description; affording, therefore, except at extreme low water, one of the best channels for steamboat communication of any river in the country.

The usual obstructions are loose sand bars at or near the mouths of the several tributary creeks and streams.

Two methods of improvement obviously present themselves for adoption: one by means of jetties or wing-dams, and the other by dredging, or excavating the sand at the several bars or shoals.

In consequence of the daming or accumulation of water in this river, by the high floods of the Mississippi, the latter method will undoubtedly be preferable towards the mouth; and, from the character of the river already noticed, it may also secure a sufficient depth of water, for a number of years at least, over the obstructions in the upper portions.

For want of time, it was proposed to make surveys at such points only as obstacles were known or found to exist. The accompanying maps are, therefore, detached portions of the river at these points, extending to navigable waters above and below the several shoals.

The following summary remarks, pertaining to each bar or shoal, together with the channels, bars, and soundings delineated upon the maps,

will, it is believed, make known all the important facts connected with the obstructions between the points above mentioned.

Shoal water, varying in the channel from four to eight feet, is found opposite Enterpize, though there is here no well characterized bar. The first serious obstacle below La Salle, is Spring creek bar, which is 2,000 feet below the mouth of that stream, and about six miles from the termination of the canal. It is a loose sand bar, stretching from the point of a long peninsula on the left bank of the river, diagonally down the stream to the opposite bank; the peninsula is formed by the river on one side, and a deep lagoon on the opposite, and Spring creek on the third side. The bar seems to have been caused by a deposite from Spring creek during high water; at which time the peninsula is overflowed, it being but one foot above the surface at this stage of water—indeed, the bar is but a continuation of this peninsula. The channel passes over about the middle of this bar, and at right angles to its general direction, the shoal water being 2.1 feet. The river is here 830 feet broad, the average breadth of the bar being 420 feet. A fall of .18 only was found here in a distance of 800 feet, extending from deep water above the bar to deep water below. On the lower side, the shoal falls off abruptly, giving a depth of eight feet at a distance of fifty feet from the lower line of soundings.

As the causes of this obstruction are still in operation, it is believed that the best permanent improvement at this place will be a jettee, extending from a suitable point on the left bank upwards, and partially across the river; this would raise the water above, and, by contracting it into a channel around its termination, produce a current there and a short distance below, which would doubtless give the requisite depth of water.

An abundance of stone for such a structure is found along Spring creek, in the immediate vicinity of this bar. Logs and uprooted trees are frequently found along the river, sometimes partially imbedded in the sand, and extending crosswise of the stream; with these exceptions a good channel is found from Spring creek bar to the head of Canan-wood island: here, a loose sand bar extends from the head of this island, in an oblique direction to the channel, which is under the right bank of the river; this channel varies from 150 to 200 feet in breadth, and has a minimum depth of five feet in the centre.

One mile and a half below this island, we come to Negro creek, which comes in through the right bank of the river, and has here deposited a bar of 400 feet in length and 250 in breadth, extending longitudinally in the river opposite the mouth of the creek. At this stage of water it is about one foot above the surface, and extends from the middle of the river nearly to the right shore. The river is here 980 feet wide, the channel varying from 150 to 200 feet in width, with a minimum depth of five feet, passes between the east side of this bar and a shoal extending along the left bank. This shoal is doubtless formed by several large trees which have lodged along the bank of the river and are now embedded in the sand. The two last obstacles, it will be seen, are by no means serious, the shoalest water being five feet; the last would undoubtedly be sufficiently obviated by removing the logs and trees to which reference has been made.

Opposite the mouth of Bureau creek, two and a half miles above Hennepin, a broad shoal makes out from the left bank of the river, though a channel sufficiently broad and deep for boats at this stage of water is found along the right bank.

The next obstacle is at the head of Hennepin island, about one and a half miles below Bureau creek, at which place an extensive shoal spreads from the head of that island, laterally, across the river and to some distance above. The main channel runs from the mouth of Bureau creek across to the left bank, nearly opposite to the head of the island; thence between the island and the left bank, varying in breadth from 100 to 150 feet, with a minimum depth of 2.3 feet. This island, as well as the shoal above it, are doubtless a deposite from Bureau creek—the bar is a loose sand formation similar to those described above. A permanent improvement here would require either a dam from the island to the right shore, or jetties from that shore to the head of the island, by means of which the stream would be turned through the channel along the left bank, and thus secure a sufficient depth of water.

The next obstruction is found about half of a mile below Hennepin. The river is here 830 feet wide; an irregular undulating shoal of light moving sand, nearly half of a mile in length, extends quite across the stream, having upon it a mean depth of water of about two feet. It will be seen by the soundings that the depth of water is here very irregular. No distinct channel could be discovered, but ridges and channels partially traversing the stream, generally at right angles, were found in various places, occasioned, it is believed, by the trees and logs which were found in the bottom more or less imbedded in the sand.

These are necessarily very dangerous for boats, more especially as the sluggishness of the current here produces no discernible ripple. It is probable that by removing these and excavating the sand to some extent, a channel of sufficient depth would be obtained for some time; but as the sand at this place is so exceedingly light and moveable, a more permanent method of improvement would be to construct one or more wing-dams as proposed at Spring creek. From this bar the water is sufficiently deep for a distance of about six miles, where a sand bar is found extending from the head of a low sand island diagonally across the stream, the upper point being 800 feet above the island on the right bank, and the lower point terminating upon another sand island 800 feet below the upper one, near the left bank.

The channel is here near the right shore, the shoalest water being 2.2 feet. At this point, the river is 800 feet wide. Logs and trees were found embedded in various places on this bar; by removing these and excavating about 1,000 cubic yards of sand, a channel sufficiently broad and deep would doubtless be produced along the right bank for all stages of water. A small stream emptying in through the left bank, about three-fourths of a mile above, has doubtless furnished the materials for the present obstruction.

From this place deep water is found to the mouth of Sandy creek, near Henry; here a very loose moving sand-bar extends around the mouth of the creek, which comes in upon the left bank. The channel is said to change its place, more or less, from year to year; the present one, however, is under the right bank where the bar is narrower than at

any other place, being only 300 feet across. The shoalest water found in the channel was 3.2 feet. Trees and logs were also found in this channel. The removal of these and the excavation of about 1,400 cubic yards of sand would probably be the cheapest method of improving the navigation at this place. One mile below Henry, at Willow island, a sand bar was found, as also at the mouth of Crow creek; but at each of these places channels sufficiently broad and deep for all stages of water were discovered.

From the mouth of Crow creek, there are no obstructions to the navigation as far as Peoria; at which place the examinations were discontinued.

From the shoalness of the water in the channels, at some of the bars which have been described above, it will be seen that the navigation of the river at this stage of water, with any class of steamboats now in use, must be entirely suspended; this, indeed, has been the case for more than two months past.

It is unnecessary to add, that this suspension to the navigation of the river is attended with very serious evils to the thousands of inhabitants who are already settled along its fertile valleys, and who at this time depend upon it as a means of communication with their market. This evil is more particularly enhanced at this time, as it is a season of the year when their produce is ready for transportation, and a supply of groceries, merchandize, &c., is necessary for their use and comfort during the coming winter.

From the unparalleled increase of the population of this section of the country, and the strong inducements that will, for many years, still be afforded for augmenting this population, it can hardly be doubted that the real wants and requirements of this section abundantly justify the prospective and liberal policy which has thus far characterised the legislative provisions of the State in relation to the present system of internal improvements.

The difficulty, if not impossibility, of ascertaining the number of logs, trees, &c., that should be removed, as well as the expense incident to such removal—the amount and character of the excavation that may be required, and the expense, per yard, of procuring stone at the different points where this kind of improvement has been proposed—will, it is presumed, be sufficient reason for excusing any attempt at an estimate of the probable expense of these several improvements which have been glanced at so hastily at the present time.

Approximate estimates will, however, be prepared and presented as soon as time will permit.

Yours, respectfully,

T. B. RANSOM, *Engineer.*

Report of T. B. Ransom.

Railroad Office,

Manville, Nov. 28, 1838.

To E. Peck, Esq.

Commissioner of the Board of Public Works.

Sir: I herewith transmit a statement of the facts as well as maps and profiles pertaining to the location of the Central railroad, northerly and southerly from the termination of the eleven miles of the same on each side of the Illinois river, located last spring.

In August, two engineering parties were organized for the above mentioned purpose. Wm. H. Seymour, Esq. was placed in charge of one at the northern termination, with directions to pursue the most "direct and eligible route" to connect with the surveys from Galena, that should be deemed consistent with economy in crossing the intermediate streams and ridges. Geo. W. Gilson, Esq. was also placed in charge of the party at the southern termination, with similar instructions in relation to that point and Bloomington.

It is but justice to these engineers, as well as to the young gentlemen generally who have composed their parties, to remark that their field operations have been conducted in the most prompt and satisfactory manner.

The results of Mr. Seymour's operations are as follows:

Direction.

The tangent at the termination of the eleven miles was continued as far as Bureau creek, a distance of eighteen and a fourth miles from La Salle, from the surveys of last year. This was considered the most favorable point to cross this stream; here the direction was changed 12 degrees to the right on a radius of 10,000 feet, in order to pass the Inlet creek at a point ascertained to be the least expensive; this last tangent was continued as far as the location was made, and if prolonged would strike Rock river about two miles above Dixon's ferry.

Topography and General Description.

The first obstacle encountered is at Negro creek, eleven and a half miles from the river. Here a valley about three-fourths of a mile wide, with a general depression of twenty-five feet, and a steep abrupt bank on the south side, is traversed nearly at right angles by the railroad line. Although this stream bed is frequently dry in summer, it drains a great extent of prairie, and is therefore swollen to a large size in the fall and spring. A bridge of thirty feet span and thirteen feet in height, with a grade on the south side of thirty-two feet per mile for a short distance, will be necessary; an easy grade from this bridge northerly is obtained for a distance of about two miles, from which a grade of forty feet per mile must be adopted, for one and a fourth miles, in order to obtain the summit between Illinois river and Bureau creek.

From Negro creek to the Inlet, the prairie becomes much more rolling and uneven than it is further south. Cuts and embankments varying from five to fifteen feet become frequently necessary, as these undulations or swells, with broad valleys between, are passed nearly at right angles by the railroad line.

At a distance of fifteen and a half miles from La Salle, we arrive at the summit before mentioned, on an ascending grade of thirty feet per mile for a short distance, this point being three hundred and eighty-six feet above the Illinois river.

The grade northerly from this point is unobjectionable as far as Pike creek, a distance of one and a half miles. This creek has a very broad valley, and will require a bridge of the same span and height as proposed at Negro creek. The grade northerly from this stream is also very easy for a distance of about one mile. Eighteen and one-third miles from the Illinois bluff we arrive at Bureau creek, situated in a deep valley not exceeding three hundred and fifty feet broad. A bridge of forty feet span and twenty-four in height will here be requisite, with a descending grade on the south side of forty feet per mile for a distance of one and a fourth miles. From this stream northerly, an ascending grade of thirty-five feet per mile for about one and three-fourths miles must be adopted; the succeeding two and a half miles admit of an easy grade with medium cuts and embankment, which brings us to the foot of the principal ridge; here commences a steep grade of forty-six feet per mile for one and a half miles, which continues to the summit between the Illinois and Rock rivers. This point is found to be four hundred and eighty-nine feet above the Illinois, and twenty-four and one-sixth miles from La Salle. A very gradual descent next occurs for three-fourths of a mile to the northern declivity of the ridge, where a grade of at least sixty-four feet per mile for a distance of two and one-third miles, with cuts and embankments ranging from ten to nineteen feet, becomes unavoidable. From the foot of this ridge, easy undulating grades, with light cuts and embankments, mostly through sand ridges, descend to the Inlet creek, distant from La Salle twenty-eight and two-thirds of a mile. The line passes this stream at a very favorable point, avoiding the low bottoms found above and below, and affording good foundations for a bridge upon a stratum of limestone, which is found a few feet under the surface at this place. The creek here is in a valley eighteen feet deep and two hundred across. A bridge of fifty feet span and thirteen in height will give sufficient water-way for the stream. A gradual ascent from this point is found to a distance of thirty miles from La Salle; at which point the location was discontinued.

The last four and a half miles of the line pass through scattering timber, though of small growth and inconsiderable value, the soil being very shallow and sandy. The ridge mentioned above is composed mostly of a coarser and more compact sand, which, from appearances, would at the depth of five or six feet be difficult to remove. This ridge extends many miles to the right and left of the point where it is traversed by the line; though it is believed that a better grade would be attainable some miles further to the west, passing a few miles easterly of the head of the Winnebago swamp; from which to Rock river an almost level prairie intervenes. Further examinations along this part of

the line seem to be necessary; indeed the passage of the Bureau and Inlet creeks, at points less favorable than those mentioned above, would doubtless be warranted, could a more favorable point of passing this ridge be discovered. Should this not be the case, it may be preferable to make such curves and re-curves in the present line as to pass this ridge obliquely, and thus, by increasing the distance, somewhat diminish the steepness of the grades, as well as the banks and cuttings on either side. Eighteen culverts, varying from three to six feet span, will be necessary on this line, the stone for which must be taken from the bluffs of the Illinois and Little Vermilion, or Spring creek and the Inlet.

The only timber traversed by this line is that noticed at the Inlet and a narrow grove at Bureau creek; valuable groves are, however, situated on either side, varying in distance from three to ten miles of the line.

Mr. Gilson's operations on the south side of the Illinois give the following result:

Direction.

The tangent at the termination of the eleven miles was continued to the north line of McLean county, a distance of nineteen miles, or thirty from the Illinois river.

Topography and General Description.

The whole extent of this nineteen miles is on a high prairie, with very few valleys or undulations, having a deep rich soil, varying from one and a half to three feet deep, and underlaid by a formation more or less argillaceous.

The commencement is at an elevation above the Illinois of two hundred and thirty-seven feet, and with the exception of a few very gentle undulations, a gradual ascent is found to a distance of 2.6 miles, which is the summit between Cedar and Sandy creeks. This point is thirty-seven feet above the commencement, or two hundred and seventy-four above the river. At distance of five miles from this summit, we arrive at Sandy creek, in a valley about two miles broad, the lowest point of which is one hundred feet below the summit mentioned above. This would give a uniform grade of thirty feet per mile, but the mile adjacent to the creek will require a grade of about thirty-five feet per mile; a similar grade will be requisite in ascending the opposite inclination of the valley for about the same distance. A bridge of thirty feet span and fourteen feet high will be necessary at this creek; from the valley of which, we find a very even surface, though gradually ascending till we arrive at the south line of the county, where the elevation is two hundred and ninety-one feet above the Illinois river.

Five or six small culverts will be necessary to pass the tributaries of Sandy creek, suitable stone for which as well as for the bridge abutments can be obtained along that stream but a short distance from the line. Timber suitable for the superstructure of the road can be obtained

along this creek also, and the head waters of the Vermilion, at distances varying from two to six miles. It should be remarked that this tangent is nearly on the right line between the termination of the canal and Bloomington, and probably presents as few obstacles to the economical construction of a railroad as any other of the same extent in the country.

As the field operations are but just completed, I am unable at this time to present all the necessary plans, estimates, &c., that are required on this part of the work; these are, however, in progress, and will be transmitted in due time.

Yours, respectfully,

T. B. RANSOM, *Engineer.*

DOCUMENT

Accompanying the Report of M. K. Alexander, Commissioner, to the Board of Public Works.

Report of J. W. Hoyt, Engineer for the Eastern Engineering District.

Paris, Illinois, June 1, 1838.

To the Honorable the Board of Public Works.

Gentlemen: Having been appointed to make the surveys of the proposed railroads in the eastern engineering district of the State of Illinois, in compliance with the law to establish and maintain a general system of internal improvements, and having attended to the service under the direction of one of your Board, Milton K. Alexander, Esq., acting Commissioner for the fourth judicial circuit, I now respectfully present the following report in relation thereto, with the estimates, plans and profiles of the routes surveyed.

Immediately after appointment, I reported myself to the acting Commissioner for the fourth judicial circuit, and received instructions to proceed to the city of New York, to procure the necessary instruments, and to engage the requisite assistants for the surveys. After complying with these instructions, I returned to Illinois on the 8th of June, 1837, and immediately organized the first engineering corps.

Central Branch Railroad.

With the first corps I commenced the experimental surveys at Terre Haute, in Indiana, for the location of this road, and continued them eighteen and one-half miles to Paris, Edgar county, Illinois, the last town in the State through which the location is required to be made; but as the country was found to be much broken and covered with a dense forest, time for a minute examination became necessary; and it was not until two hundred miles of experimental lines had been traced, that the approximate location was obtained. This location passes the eastern boundary of the State near the head waters of Middleton's creek, about one mile north of a direct line from Terre Haute to Paris, and continues nine miles straight, over a very level and heavy timbered country, to Sugar creek, a small stream that runs two miles east of Paris, and flows into Wabash river three miles below Terre Haute. From this creek a deflection of about fifty degrees to the left, on a radius of three thousand feet, and the maximum grade of forty feet to the mile, became necessary to ascend the elevated table land on which the town of Paris is situated; and the country being somewhat undulating, several tressle bridges and heavy embankments will be required for the graduation of the road.

The next point being Charleston, in Coles county, I continued the experimental surveys from Paris to that town, and, finding the topography of the country favorable, located the approximate line from the proposed depot, situated about five hundred feet north of the court house at Paris, direct to Charleston, a distance of twenty-seven miles. This line passes over a level prairie, requiring but little grubbing and clearing, and light excavations and embankments for nineteen miles, to a point four and one-

half miles east of Embarrass river, where the timber commences, and the country becomes more broken; and as the line advances towards the river, heavy excavations and embankments are to be encountered; and to cross it a bridge of two hundred and twenty feet in length will be required. After passing Embarrass river, the country still continues broken, and will require cutting and filling from five to forty feet, for about one mile, where the grade intersects a level prairie which continues without interruption to Charleston.

Shelbyville, in Shelby county, being the next and last point in the eastern district, I continued the experimental surveys from Charleston to that town, and found after a thorough examination of the country, that it was advisable to run by a reversed curve, northwesterly from Charleston, two miles, to avoid the broken ground adjacent to Muddy and Kickapoo creeks; after passing which, the line was continued thirty and one-half miles direct, but three degrees from a straight course towards Shelbyville, to Kaskaskia river; and as the river passes within three thousand feet, and is one hundred and twelve feet below the town, much difficulty was found in selecting a favorable crossing. After a thorough examination of the country for six miles, both north and south of Shelbyville, it was found advisable to pass the Kaskaskia nearly opposite to the town, eighty-five feet above low water mark; and by a deep cut at the village of Shelbyville, the grades of the Central Branch and Central roads are brought upon the same horizontal plane. The country between Charleston and Shelbyville over which the line is located is generally a level prairie, and no difficulties are to be encountered in graduating the road, with the exception of crossing Kaskaskia river and the adjoining valley, which will require heavy embankments and an expensive bridge.

Northern Cross Railroad.

By the act establishing the internal improvements, this road is required to be located in the eastern district, as follows, viz: through the towns of Decatur, Macon county, Sydney, Champaign county, Danville, Vermilion county, and to the east line of the State, in the direction of Lafayette, in Indiana.

With the second engineering corps, which was organized on the 1st of July, 1837, I commenced the surveys of the Northern Cross railroad at Danville, by examining the topography of Big Vermilion river, which it was found necessary to pass, and selected two crossing places for a minute examination; the first located near the upper, and the second near the lower end of Danville. Over the first crossing I ran two lines, one descending with the maximum grade of forty feet to the mile, passed the river seventy-five feet above low water mark, and continued up a very broken valley, for about five thousand feet, to the level prairie; the other passed the river near the same place, eighty feet above low water mark, and immediately ascended to the surface of the prairie. Both of these lines were found very unfavorable, requiring heavy embankments upon the Danville side—the one a sinuous location up the valley before mentioned, the other a very heavy cut on the opposite side of the river. The survey of the lower crossing was commenced in and continued

down Hazle street, in Danville, nearly to the river, and passing seventy-five feet above low water mark, was continued up a deep valley requiring but little cutting and filling, and over a level prairie for three thousand feet, where the ascending grade of forty feet to the mile intersected the surface of the ground. As the graduations upon this line were found to be much less, and no other expenses to exceed the upper crossings, it was adopted as the most favorable location of the road.

After passing the Big Vermilion, the surveys were continued on a direct course to Sydney; but as the country proved very broken, the line was deflected to the left, and run over a level prairie to Butler's point, situated near Danville and Sydney road, about six miles from Danville village. At Butler's the line had passed the broken ground that prevented a direct location from the crossing of Vermilion river, and as there was no obstruction it was continued direct, seventeen and one-half miles over a very level prairie, to Sydney.

From Sydney two experimental lines were traced to Decatur; and finding the country favorable, the approximate location was made direct between these two towns, a distance of forty-eight miles. This line for much of the distance passes over a dry prairie requiring but little graduation, with the exception of crossing Sangamon river, four and one-half miles east of Decatur, where a bridge of two hundred feet in length will be necessary.

From Danville to the east line of the State, in the direction of Lafayette, in Indiana, I traced an experimental line, and continued it to Williamsport, a town situated on Wabash river, near a direct course between Danville and Lafayette. After obtaining a thorough knowledge of the topography of Williamsport and the adjacent country, the approximate location was commenced at Danville, and continues nine miles straight to the east line of the State, as near a direct course towards Lafayette as it was practicable to build the road. This location is generally over a level prairie, presenting but little obstruction to building the road, with the exception of crossing Stoney creek and the adjacent valley, which require only a large stone culvert and an embankment of about twenty feet in height and eighteen hundred in length.

Central Railroad.

The towns designated in the eastern district by the act establishing the internal improvements, through which this road is required to be located, being Decatur, Macon county, Shelbyville, Shelby county, and Vandalia, Fayette county, I commenced the surveys at Decatur, and ran an experimental line direct to Shelbyville; but as the ground contiguous to the crossing of Sangamon river, about one mile south of Decatur, was found much broken, it became necessary to examine minutely the topography of the river, to obtain, if practicable, a more favorable crossing. This examination resulted in selecting the place for passing the river about one thousand feet west of a straight line from Decatur to Shelbyville, and the approximate location was made direct from Decatur one mile to this crossing; and, passing the river fifty-five feet

above its waters, was continued on the same course four miles, where a deflection of twenty-four degrees to the left became necessary. From this deflection the line continues straight twenty-six and one-half miles to Shelbyville, from which the first experimental line to Vandalia was run direct; but as it crossed Kaskaskia river several times, and continued much of the distance on its bluffs, it was found wholly impracticable; and a second line was traced from Vandalia northerly, to secure, if possible, distance sufficient on the west side of Kaskaskia river to enable a direct location to be made for the remainder of the distance; but the broken ground contiguous to Ramsay's and Beck's, Cold Spring and Robinson's creeks, prevented; and it was not until several lines had been traced, and a thorough knowledge of the country obtained, that the approximate location was completed. This location passes from the village of Shelbyville thirty-two degrees to the right of a direct line to Vandalia for three and one-half miles to Robinson's creek, where a deflection of thirty-three degrees to the left was made, and the line continued on a tangent five miles, where a deflection of three degrees to the right became necessary; and from this curve the line was continued direct, passing Beck's and Ramsay's creeks about six miles from Kaskaskia river, to a point about four miles northwest of Vandalia, where another deflection to the left was made; and from this curve the line was located straight to Vandalia.

The country between Decatur and Shelbyville, over which the line is located, is, in general, a level wet prairie; and to protect the railway from water, the grade for much of the distance will be from two to five feet above its surface. No other impediments are presented to building the road, with the exception of crossing Sangamon river and valley adjoining it, which will require heavy embankments and a bridge of about two hundred feet in length. From Shelbyville to Vandalia, the country is broken by the valleys of Robinson's, Cold Spring, Beck's, and Ramsay's creeks, all of which it will be necessary to pass; and the graduations of the road in many places must be made by deep cuttings and fillings, instead of light embankments of borrowed earth taken from side ditches, which, from the levelness of the country, is more often required.

For more details respecting the locations of the roads, I refer the honorable Board to the annexed tables and the accompanying plans and profiles of the routes surveyed.

Construction.

The first object claiming attention in the construction of a railroad, is the graduation or reduction to a series of planes, of certain inclinations and widths, the country over which the line is located.

The planes of the roads in the eastern district are to be formed from fourteen to fifteen feet in width, and to have any inclinations not exceeding the rate of forty feet to the mile. The ground thus graduated will admit of a single railway to be laid upon it, formed for both horse and locomotive power. The method proposed to obtain these planes, is by bridging over the rivers and deep valleys, and constructing culverts of wood or stone over small streams; and by excavating the ground above, and, with the material excavated, embanking the valleys and ground be-

low the grade lines. Where the excavations exceed the embankments, the surplus is to be thrown out upon the sides of the cuts, or wasted in spoil-banks in the most convenient places; but where the embankments exceed the excavations, the excess is to be supplied by earth taken from side ditches, excavated parallel with the outside slopes of the embankments, the inclinations of the sides of the embankments varying from forty to sixty degrees, and the sides of the excavations to be according to the material excavated, and will incline from thirty to eighty degrees.

The surface of the ground, previous to receiving the embankments, is to be cleared from all vegetable matter; and where trees and saplings are found on all cuts, and where the embankments are less than four feet in height, they are to be grubbed, together with the roots above the surface of the ground; but where the embankments exceed four feet in height, the trees, bushes, &c., are to be cut close to the surface of the ground and removed, with all other vegetable matter, to a distance of at least forty feet from the centre of the road. All trees, bushes, &c., that occur outside of the cuts and embankments, and within forty feet of the centre line of the road, are to be cut within one foot of the ground and removed, together with all logs, stumps, &c.

The bridges over large streams to be built of wood upon Long's plan; the dimensions of the timber, number of stringers, braces, &c., to conform to the spans as given in a work entitled "A description of Col. Long's bridges, together with a series of directions to bridge builders;" with the exception of having four stringers, five braces, &c., for the middle truss work where the spans exceed one hundred and seventy-eight feet; to be built of suitable sawed timber, procured nearest to the location, free from knots, shakes and splits; and, after completion, well painted without planing, and supported by double bolster frames, resting upon wooden tressles: these tressles supported by dry masonry laid in regular courses, with the beds of the stone well hammer-dressed. The railway to be upon the top of the middle stringers, and where a common roadway is required, the lower stringers are to be planked, and the road brought to them by embankments or tressle work, so as to admit the passage of all teams, &c., under the railway, and thereby avoiding the danger they would be subjected to, were they to pass upon the same level with the engine and cars.

Bridges of the above description, with the exception of the common roadway, of spans from one hundred and fifty to two hundred and forty feet, will be required on the Central Branch railroad, for passing Embarrass river near Charleston, and Kaskaskia river at Shelbyville, (see plate 7,) and on the Northern Cross railroad, with the common roadway, for crossing Big Vermilion river near Danville; and without the common roadway, for passing Sangamon river near Decatur, (see plate 8;) and also on the Central railroad, for passing the Sangamon one mile south of Decatur.

To pass deep valleys where the cost of embanking would be too great, tressle bridges built of sound white, burr, or post-oak, from the simple post and stringer to those formed by a combination of corbles, struts, and straining-beams will be required (see plates 10 and 11) on the Central Branch railroad; those of about fifty feet span will be necessary to pass Lane's branch and Sugar creek, near Paris; and to connect the

embankments with the bridge over Kaskaskia river, and on the Northern Cross railroad, to connect the ends of the bridges over Sangamon and Big Vermilion rivers with the embankments; and on the Central railroad to pass Beck's creek, between Shelbyville and Vandalia, and to connect the embankments with the bridge over Sangamon river, near Decatur.

To pass creeks where the embankments are more than ten feet in height, arched or box culverts, built of dry rubble masonry, will be necessary; and for the passing of streams where the embankments are less than ten feet in height, and where sluices are necessary to prevent water from accumulating in basins and overflowing the road, wooden culverts are to be built, brought to the grade, and so formed that stone can be substituted in their places, after the completion of the graduation, without interrupting the transportation on the track.

The Superstructure.

After the completion of the graduations, the roads are prepared to receive the railways; and as the act establishing the internal improvements is silent upon the form of the track or railway, with the exception of specifying a wooden superstructure; and as your honorable Board have submitted their constructions to the engineers of the different districts, I propose the following to be adopted on the roads under my charge.

It is intended to form the superstructure by a combination of string-pieces, mud-sills, sleepers, keys, and the iron necessary for the track, viz: the rails, plates, and spikes. The string-pieces to be sawed from sound white, burr, or post-oak, locust or black-walnut, free from sap-wood and all defects that will impair its strength, tenacity, or durability, eight and one quarter inches in width by four and one half in thickness, of not less than fourteen feet three inches in length; and if longer to increase by lengths of four feet nine inches. The mud-sills to be sawed or hewed from any of the above mentioned oaks, or black-walnut, sassafras or locust, free from all defects, two and three quarter inches in thickness, and of not less than ten inches in width, exclusive of the sap-wood, and twelve or more feet in length. The sleepers to be formed from any of the last mentioned timbers, eight feet in length, and of not less than eight inches in diameter, exclusive of the sap-wood; and their ends to be cut or sawed off at right angles; to be hewed, free from windings on one side, through their entire lengths, so as to have a bearing of at least four inches on any part; and on the opposite side two notches to be formed from three to six inches in depth, according to the diameter of the sleepers, and of sufficient width to admit the string-pieces, and keys to be inserted in them, the base of the notches to be parallel with the hewed side, and a perpendicular thickness of at least two inches to be left between the notches and the bottom or hewed part of the sleepers between the notches to be cut out circular, to adapt them to a horse path; but in no case are they to be reduced to a less thickness than three and three quarter inches. The keys to be eighteen inches in length, two in width, and two in thickness at the largest, and three quarters at their smallest ends.

Two continuous lines of mud-sills, prepared as above described, are then to be laid longitudinally upon the grade of the road, parallel to

each other, four feet nine inches from centre to centre, and under their ends, and in contact with them, mud-sills three feet in length, to be so placed that the ends of the top sills will have an equal bearing on those beneath, and the whole bedded into the road, so that the upper surfaces of the mud-sills will be even with the grade. Sleepers prepared as above described are then to be placed transversely upon the mud-sills, parallel to each other, four feet nine inches from centre to centre, and two continuous lines of string-pieces, (the width of eight and one quarter inches being vertical,) are then to be inserted in the notches, and confined in their places, by driving the keys before mentioned between the inside of the string-pieces and the notches. On the top and middle of the string-pieces, plate-iron rails from twelve to fifteen feet in length, two and one half inches in width, and five-eighths of an inch in thickness, are to be nailed every eighteen inches, with spikes four and one-half inches in length, driven through holes counter-sunk in the rails; the width between the rails to be four feet eight inches and three quarters, and under their ends, a small plate of iron to be inserted, to prevent them from settling unequally into the string-pieces. The projecting edges of the string-pieces on the inside of the rails are to be chamfered, so that the flanges of the wheels to be used upon the road will not come in contact with them; and the outer edges from the side of the rails are also to be chamfered sufficiently to carry off all water.

After the railway is laid and brought to proper adjustment, gravel or sand is to be filled in between the rails to form a horse-path; a cross section of the filling to present an arch of a circle, the highest part of which will cover the middle of the sleepers two inches, and the lowest to cover the mud-sills, but to leave a space under the stringers of sufficient width to carry off all water that would otherwise accumulate between them.

Estimates.

The annexed tables exhibit the grades and horizontal curvatures, and the estimated cost of constructing the railroad, in the eastern district, viz: the Central Branch from the east line of the State to Shelbyville; the Northern Cross from the east line of the State to Decatur; and the Central from Decatur to Vandalia.

Tables No. 1, 9 and 18, exhibit the grades and horizontal curvatures. Tables Nos. 2, 3, 4, 5, 10, 11, 12, 13, 14, 19, 20, 21 and 22, exhibit the estimates for the graduation. Tables No. 6, 15 and 23, exhibit the estimates for the superstructures. And tables No. 7, 8, 16, 17, 24 and 25, exhibit a recapitulation and summary of the whole.

CENTRAL BRANCH RAILROAD.

TABLE No. 1.

An exhibit of the Grades and Horizontal Curvatures, from the east line of the State to Shelbyville.

No. of the grades.	Length of the grades, in feet.	Inclination of the grades per mile, in feet and hundredths.	No. of feet of straight line.	Number of feet of curved line.	Radii of the curves.	Remarks.
1	5,400	–	5,400	–	–	At the State line.
2	5,200	27.4	5,200			
3	4,600	3.4	4,600			
4	4,400	14.0	4,400			
5	4,000	–	4,000			
6	6,400	13.0	6,400			
7	3,200	–	3,200			
8	4,000	18.5	4,000			
9	3,200	9.9	3,200			
10	1,900	33.4	1,900			
11	3,200	–	3,200	–	–	At Lane's branch.
12	2,400	30.8	300	2,100	3,000	
13	1,200	–	1,200	–	–	At Sugar creek.
14	3,600	36.7	3,600			
15	4,800	15.3	4,800	–	–	Near Paris depot.
16	3,200	40.0	3,200			
17	2,800	–	2,800			
18	4,800	11.0	4,800			
19	3,600	–	3,600			
20	2,800	7.6	2,800			
21	3,600	–	3,600			
22	2,800	7.6	2,800			
23	2,000	23.5	2,000			
24	2,800	–	2,800			
25	3,200	23.1	3,200			
26	2,400	29.0	2,400			
27	4,400	2.0	4,400	–	–	Over a dry prairie, between Paris and Charleston.
28	5,500	2.5	5,500			
29	6,885	9.2	6,885			
30	8,440	12.0	8,440			
31	3,700	23.7	3,700			
32	5,550	4.3	5,550			
33	7,450	7.0	7,450			
34	12,765	11.0	12,765			
35	6,145	5.5	6,145			
36	9,900	9.0	9,900			
37	3,855	10.0	3,855			
38	9,500	16.8	9,500			

CENTRAL BRANCH RAILROAD—Continued.

TABLE No. 1—Continued.

No. of the grades.	Length of the grades, in feet.	Inclination of the grades per mile, in feet and hundredths.	Number of feet of straight line.	Number of feet of curved line.	Radii of the curves.	Remarks.
39	3,400	40.0	3,400	–	–	To Embarrass river.
40	400	–	400	–	–	Passes Embarrass river.
41	2,800	40.0	2,800	–	–	From Embarrass river.
42	6,905	19.0	6,905			
43	4,000	10.0	4,000			
44	4,200	12.0	1,600	2,600	4,000	To Charleston village.
45	8,533	11.0	5,333	3,200	4,500	
46	4,605	15.8	4,605	–	–	Passes Muddy creek.
47	4,150	15.7	4,150			
48	4,915	20.6	4,915	–	–	Passes Kickapoo creek.
49	3,220	7.4	3,220			
50	6,315	18.0	6,315			
51	7,000	9.0	7,000			
52	8,500	11.0	8,500			
53	8,240	18.6	8,240			
54	6,715	8.4	6,715			
55	7,435	6.6	7,435			
56	5,320	8.7	5,320			
57	7,310	30.0	7,310			
58	4,315	10.6	4,315			
59	2,760	–	2,760	–	–	On the summit.
60	10,380	5.3	10,380			
61	10,285	13.5	10,285			
62	8,000	8.0	8,000			
63	8,880	4.0	8,880			
64	16,190	9.3	16,190			
65	13,345	5.6	13,345			
66	11,090	15.0	11,090			
67	8,545	33.0	4,900	3,645	5,800	Descends to Kaskaskia river.
68	1,000	–	1,000	–	–	Passes Kaskaskia river.
69	2,090	40.0	2,090	–	–	Ascends to Shelbyville.

Tables No. 2, 3, 4, and 5, exhibit the number and length of the sections on the 1st, 2d, 3d, and 4th divisions, extending from the State line to Shelbyville—the cubic yards of excavation put into embankment, and wasted in spoil-banks—of borrowed earth—perches of stone work—square rods of grubbing and clearing—lineal feet of bridging—wooden culverts—sundries—the price and amount of each, and the total of all.

TABLE No. 2—DIVISION 1, *extending from the State line westerly.*

Number of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard, in cents.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard, in cents.	Amount.	Cubic yards of borrowed earth.	Price per yard, in cents.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	No. of wooden culverts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per rod, in cents.	Amount.	Sundries—sodding and ditching.	Total Amount.
1	4,500	965	25	$241 25	-	-	-	19,616	13	$2,553 98	300	$7 00	$2,100 00	-	$	-	1,411	58	818 38	$ -	$5,713 61
2	5,200	1,197	22	263 34	-	-	-	7,881	16	1,260 96	-	-	-	2	45	$90 00	1,529	50	764 50	-	2,378 80
3	4,200	841	16	134 56	-	-	-	10,246	14	1,434 44	-	-	-	1	45	45 00	1,394	90	1,254 60	-	2,868 60
4	5,600	832	25	208 00	-	-	-	7,832	13	1,018 16	-	-	-	1	45	45 00	1,547	58	897 26	-	2,168 42
5	4,400	1,666	25	416 50	-	-	-	11,146	13	1,448 98	-	-	-	1	45	45 00	1,295	58	751 10	-	2,661 58
6	5,600	400	25	100 00	-	-	-	9,412	13	1,223 56	-	-	-	1	45	45 00	1,646	58	954 68	-	2,323 24
7	4,400	901	25	225 25	-	-	-	21,372	13	2,778 36	400	7 00	2,800 00	1	45	45 00	1,295	58	751 10	-	6,599 71
8	5,600	1,000	25	250 00	-	-	-	9,216	13	1,198 08	100	7 00	700 00	2	45	90 00	1,646	58	954 68	-	3,192 76
9	5,400	5,500	23	1,265 00	2,000	17	$340 00	900	20	180 00	500	9 25	4,625 00	1	45	45 00	1,205	67	807 35	-	7,262 35
10	5,600	10,000	23¾	2,375 00	6,661	15	999 60	-	-	-	900	9 25	8,325 00	-	-	-	1,647	50	823 50	-	12,523 10
11	5,600	20,821	20	4,164 20	-	-	-	2,379	12½	297 37	300	7 00	2,100 00	3	45	135 00	1,276	55	701 80	-	7,398 37
12	6,000	798	16	127 68	-	-	-	4,615	12½	576 87	-	-	-	2	45	90 00	-	-	-	150	944 55
13	6,400	3,172	19	602 68	-	-	-	4,944	11¾	580 92	-	-	-	2	45	90 00	-	-	-	175	1,448 60
14	5,200	4,000	19	760 00	1,560	19	180 00	278	11¾	32 66	-	-	-	1	45	45 00	-	-	-	150	1,167 66
15	6,000	1,042	15	156 30	1,000	14	140 00	5,803	14	812 42	-	-	-	4	45	180 00	588	64	376 32	150	1,815 04
16	5,200	6,604	14	924 56	-	-	-	14,000	15	2,100 00	-	-	-	1	45	45 00	-	-	-	150	3,219 56
17	5,600	500	22	110 00	-	-	-	9,076	13¾	1,247 95	-	-	-	1	45	45 00	-	-	-	250	1,652 95
18	4,600	300	22	66 00	-	-	-	11,437	13¾	1,572 58	-	-	-	2	45	90 00	-	-	-	225	1,953 58

TABLE No. 3—DIVISION 2, *extending to Charleston.*

No. of the sections.	Length of the sections in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	No. of wooden culv'ts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per rod.	Amount.	Sundries—sodding & ditching.	Total Amount.
			cts			*cts*	$		*cts*			$						$				*cts*			
19	9,000	10,550	26	$2,743 00	-	-	-	8,000	13	1,040 00	-	-	-	-	-	-	2	60	120 00	-	-	-	$100	$4,603 00
20	6,000	532	20	106 40	-	-	-	9,743	13	1,266 59	-	-	-	-	-	-	2	60	120 00	-	-	-	200	1,692 99
21	6,000	549	20	109 80	-	-	-	11,311	13	1,470 43	-	-	-	-	-	-	1	60	60 00	-	-	-	150	1,790 23
22	5,900	3,549	26	922 74	2,000	13	260	5,356	13	696 28	-	-	-	-	-	-	1	60	60 00	-	-	-	100	2,039 02
23	6,195	10,413	26	2,707 38	-	-	-	-	-	-	-	-	-	-	-	-	2	60	120 00	-	-	-	150	2,977 38
24	6,400	1,596	24	383 04	-	-	-	5,802	13	754 26	-	-	-	-	-	-	2	60	120 00	-	-	-	150	1,407 30
25	6,000	5,949	22	1,308 78	-	-	-	14,421	12	1,730 52	-	-	-	-	-	-	2	60	120 00	-	-	-	150	3,309 30
26	5,700	732	26	190 32	-	-	-	6,951	13	903 63	-	-	-	-	-	-	1	60	60 00	-	-	-	200	1,353 95
27	6,700	2,488	24	597 12	-	-	-	20,686	12	2,482 32	-	-	-	-	-	-	2	60	120 00	1,176	55	$646 80	-	3,846 24
28	6,000	7,705	26	2,003 30	-	-	-	3,359	12	403 08	-	-	-	-	-	-	1	60	60 00	705	55	387 75	-	2,854 13
29	5,500	4,627	23	1,064 21	-	-	-	5,279	13	686 27	110	5	$550	-	-	-	1	70	70 00	1,617	55	889 35	-	3,259 83
30	5,200	7,000	25	1,750 00	3,000	13	330	2,498	12	299 76	100	5	500	-	-	-	1	70	70 00	1,470	55	808 50	-	3,818 26
31	5,900	14,775	24	3,546 00	-	-	-	3,977	12	477 24	-	-	-	-	-	-	1	60	60 00	1,470	55	808 50	-	4,891 74
32	6,000	122,232	28	34,224 96	3,509	14	490	-	-	-	7,200	6	43,200	210	29	$6,090	-	-	-	1,764	55	970 20	*2,500	87,475 16
33	5,800	38,911	20	7,782 20	-	-	-	45,248	18	8,144 64	1,210	5	6,050	-	-	-	-	-	-	588	59	294 00	-	22,270 84
34	6,000	14,200	22	3,124 00	-	-	-	-	-	-	-	-	-	-	-	-	1	50	50 00	-	-	-	-	3,174 00
35	4,800	1,064	23	244 72	-	-	-	26,873	14	3,762 22	-	-	-	-	-	-	1	70	70 00	177	55	97 35	-	4,174 29

* Bridge foundations and trestle and bolsters.

TABLE No. 4—DIVISION 3, *extending towards Shelbyville.*

No. of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	Number of wooden culverts.	Price for each.	Amount.	No. of rods of grubbing & clearing.	Price per rod.	Amount.	Sundries—sodding and ditching.	Total amount.
			cts.			cts.			cts.																
36	6,000	7,612	24	$1,834 08	-	-	-	7,596	14	$1,050 84	100	$5	$500	-	-	-	-	$	-	988	50	$494 00	-	$3,878 92
37	6,000	3,529	24	846 96	-	-	-	6,151	12	738 12	-	-	-	400	$	$3,200	1	60	$60	1,764	55	970 20	-	5,815 28
38	4,500	4,833	23	1,112 97	1,653	14	$231 42	-	-	-	-	-	-	-	-	-	1	60	60	1,294	55	711 70	-	2,116 09
39	5,000	10,749	23	2,470 26	-	-	-	5,008	13	651 04	-	-	-	350	-	2,450	-	-	-	946	50	473 00	-	6,044 24
40	5,000	5,287	25	1,321 75	-	-	-	3,892	14	544 88	90	5	450	-	-	-	-	-	-	-	-	-	$100	2,416 63
41	4,500	532	24	127 68	-	-	-	5,776	12	693 12	-	-	-	-	-	-	-	-	-	-	-	-	175	995 80
42	6,000	3,908	24	942 72	-	-	-	2,237	12	268 44	-	-	-	-	-	-	1	50	50	-	-	-	150	1,411 16
43	5,000	2,814	23	647 22	-	-	-	2,048	12	245 76	-	-	-	-	-	-	1	50	50	-	-	-	150	1,092 98
44	7,000	2,565	25	641 25	-	-	-	6,972	12	836 64	-	-	-	-	-	-	2	50	100	-	-	-	150	1,727 89
45	5,000	1,596	24	383 04	-	-	-	9,145	13	1,188 85	-	-	-	-	-	-	1	50	50	-	-	-	100	1,721 89
46	4,500	665	24	159 60	-	-	-	4,472	12	536 64	-	-	-	-	-	-	1	50	50	-	-	-	200	946 24
47	5,000	532	24	127 68	1,908	11	120 78	2,756	12	330 72	-	-	-	-	-	-	1	50	50	-	-	-	275	904 18
48	5,500	665	24	159 60	-	-	-	7,560	13	982 80	80	5	400	-	-	-	2	50	100	-	-	-	100	1,742 40
49	6,500	1,900	25	250 00	1,926	12	231 12	12,110	13	1,574 30	90	5	450	-	-	-	-	-	-	-	-	-	100	2,605 42
50	5,000	500	25	125 00	-	-	-	5,343	14	748 02	-	-	-	-	-	-	1	50	50	-	-	-	175	1,098 02
51	6,000	1,900	25	250 00	2,082	12	249 84	2,780	13	361 40	-	-	-	-	-	-	-	-	-	-	-	-	200	1,061 24

TABLE No. 5—DIVISION 4, *extending to Shelbyville.*

No of the sections.	Length of the stations, in feet.	Cubic yards of excavation put into embankment.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	No. of wooden culverts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per yard.	Amount.	Sundries—sodding & ditching, &c.	Total amount.
			cts			cts			cts			$			$			$			cts			
52	6,000	1,596	22	$351 12	–	–	–	6,624	13	$861 12	–	–	–	–	–	–	2	55	$110	–	–	–	$ 0	$1,322 24
53	7,000	1,156	23	265 88	–	–	–	9,174	13	1,192 62	–	–	–	–	–	–	1	55	55	–	–	–	100	1,613 50
54	6,500	4,030	24	967 20	–	–	–	5,454	13	709 02	–	–	–	–	–	–	1	55	55	–	–	–	100	1,831 22
55	5,000	665	23	152 95	–	–	–	6,553	13	851 89	–	–	–	–	–	–	2	55	110	–	–	–	100	1,214 84
56	5,000	1,000	25	250 00	2,724	11	$299 64	2,854	13	371 02	–	–	–	–	–	–	2	55	110	–	–	–	175	1,205 66
57	6,000	1,596	22	351 12	–	–	–	8,472	14	1,186 08	–	–	–	–	–	–	1	55	55	–	–	–	150	1,742 20
58	7,500	1,330	22	292 60	–	–	–	4,972	14	696 08	–	–	–	–	–	–	2	55	110	–	–	–	250	1,348 68
59	6,500	488	23	112 24	–	–	–	8,787	14	1,230 18	–	–	–	–	–	–	2	55	110	–	–	–	175	1,627 42
60	6,000	3,034	24	742 56	–	–	–	1,476	15	221 40	–	–	–	–	–	–	1	55	55	–	–	–	250	1,268 96
61	7,500	1,330	24	319 20	–	–	–	13,540	12	1,624 80	–	–	–	–	–	–	2	55	110	–	–	–	100	2,154 00
62	5,888	–	–	–	–	–	–	8,247	13	1,072 11	–	–	–	–	–	–	1	55	55	–	–	–	150	1,277 11
63	5,150	532	22	117 04	–	–	–	12,293	13	1,598 09	–	–	–	–	–	–	1	50	50	–	–	–	100	1,875 13
64	7,800	2,064	25	516 00	4,000	11	440 00	3,594	13	467 22	–	–	–	–	–	–	2	50	100	1,440	50	$720 00	–	2,243 22
65	5,600	3,030	22	666 60	1,000	10	100 00	39,206	14	5,488 84	300	5	1,500	–	–	–	–	–	–	1,547	50	773 50	–	8,528 94
66	4,400	14,831	20	2,966 20	–	–	–	102,500	16	16,400 00	1,400	6	8,400	150 1,000 200	7 26 16	$1,050 26,000 3,200	–	–	–	1,090	50	545 00	*10,000	68,561 20

*Bridge foundations, and for trestle and bolster frames.

TABLE No. 6.

The Superstructure.

An exhibit of the number and lengths of the divisions—lineal feet of stringers and mud-sills—number of sleepers and keys—tons of rail-way iron—pounds of spikes and plates—the price and amount of each, delivered upon the road every two hundred feet—rods of rail-laying—with the price and amount, and total of all.

No. of the divisions.	Length of the divisions, in feet.	Lineal feet of string-pieces.	Price per ft.	Amount.	Lineal feet of mud-sills.	Price per ft.	Amount.	Number of sleepers.	Price for each	Amount.	No. of keys.	Price for each	Amount.
			cents.			*cents.*			*cents.*			*cents.*	
1	95,100	190,200	5.3	$10,080 60	237,750	4.3	$10,223 25	20 021	14	$2,802 94	40,042	2	$800 84
2	102,195	204,390	5.5	11,241 45	255,486	4.5	11,496 87	21,514	17	3,657 38	43,028	2	860 56
3	86,500	173,000	5.5	9,515 00	216,250	4.5	9,731 25	18,210	17	3,095 70	36,439	2	728 40
4	91,838	183,676	5	9,183 80	229,595	4.	9,183 80	19,334	14	2,706 76	38,668	2	773 36

The Superstructure—Continued.

No. of the divisions.	Tons of rails.	Price per ton.	Amount.	Pounds of spikes.	Price per lb.	Amount.	Pounds of plates.	Price per lb.	Amount.	Rods of rail-laying.	Price per rod, including the filling of track.	Amount.	Total amt.
					cents.			*cents.*					
1	396	$100	$39,600 00	17,514	15	$2,627 10	7,044	11	$774 84	5,763	$4	$23,052 00	$89,961 57
2	426	100	42,600 00	18,821	15	2,823 15	7,570	11	832 70	6,193	4	24,772 00	98,284 11
3	360	100	36,000 00	15,930	15	2,389 50	6,400	11	704 77	5,243	4	20,972 00	83,136 62
4	383	100	38,300 00	16,914	15	2,537 10	6,802	11	748 22	5,566	4	22,264 00	85,637 04

RECAPITULATION OF THE CENTRAL BRANCH RAILROAD.—Table No. 7.

The Grades and Curvatures.

No. of the grades.	Total length.	Mean inclination per mile, in feet and hundredths.	Number of feet of straight line.	Number of feet of curved line—the radii of the curves from 3,000 to 5,800 feet.
69	375,633	13.1	364,088	11,545

The Graduation.

No. of the divisions.	Length of the divisions, in feet.	Cub. yds ex cava. put into embank't.	Amount.	Cubic yards wasted in spoil-banks.	Amount.	Cubic yards of borrowed earth.	Amount.	Perches of masonry.	Amount.	Lineal feet of bridging.	Amount.	No. of wooden culverts.	Amount.	No. of rods of grubbing & clearing.	Amount.	Amount for sundries.	Total am't.
1	95,100	60,539	$12,390 32	11,164	$1,659 60	150,183	$20,317 29	-	-	2,500	$20,650	26	$1,170	16,479	$9,855 27	$1,250	$67,292 48
2	102,195	246,872	62,807 97	8,500	1,140 00	169,504	24,117 24	8,620	$50,300	210	6,090	21	1,286	8,967	4,902 45	3,700	154,337 66
3	86,500	47,834	11,399 75	6,759	833 16	83,756	10,751 57	360	1,800	750	5,650	12	620	4,992	2,648 90	1,875	35,578 38
4	91,838	36,742	8,070 71	7,724	839 64	233,746	33,970 47	1,700	9,900	1,350	30,250	20	1,085	4,077	2,038 50	11,850	98,004 33
	375,633	391,987	94,668 75	34,147	4,472 40	637,189	89,156 57	10,680	62,000	4,810	62,640	79	4,155	34,515	19,445 12	18,675	355,212 84

The Superstructure.

Total length of the road, in feet.	Lineal feet of stringers.	Amount.	Lineal feet of mud-sills.	Amount.	Number of sleepers.	Amount.	Number of keys.	Amount.
375,633	751,266	$40,020 85	939,081	$40,635 17	79,079	$12,262 78	158,158	$3,163 16

Superstructure—Continued.

Tons of rails.	Amount.	Pounds of spikes.	Amount.	Pounds of plates.	Amount.	Rods of rail laying.	Amount.	Total amount.
1,565	$156,500 00	69,179	$10,376 85	27,823	$3,060 53	22,765	$91,060 00	$357,079 34

Summary of estimates of the Central Branch Railroad.

TABLE No. 8.

Of the graduation - - - -	$355,212 84 =	$4,992 96 per mile.
Of the superstructure, including the gravelling of the railway - - - -	357,079 34 =	5,019 20 per mile.
Three depots, viz: at Paris, Charleston, and Shelbyville - - - - -	24,000 00	
Land, damage, and depot ground - -	7,100 00	
Engineering and contingencies connected therewith - - - - - -	10,000 00	
Total estimate of the Central Branch Railroad, from the east line of the State to Shelbyville	753,392 18 =	10,589 88 per mile.

NORTHERN CROSS RAILROAD.

TABLE No. 9.

An exhibit of the Grades and Horizontal Curvatures, from the east line of the State to Decatur.

No. of the grades.	Length of the grades, in feet.	Inclination of the grades per mile, in feet and hundredths.	No. of feet of straight line.	No. of feet of curved line.	Radii of the curves.	Remarks.
1	8,500	33.9	8,500	–	–	At the State line.
2	7,125	1.5	7,125			
3	6,425	26.3	6,425			
4	4,125	10.5	4,125			
5	6,800	3.8	6,800			
6	12,075	40.0	12,075	–	–	Passes Stoney creek.
7	3,550	-	2,550	1,000	3,000	To Danville depot.
8	2,002	29.0	1,002	1,000	3,000	To Vermilion river.
9	600	-	600	–	–	Passes the Vermilion river.
10	5,900	40.0	5,900	–	–	Through a deep cut.
11	2,800	24.0	2,800			
12	1,600	-	1,600			
13	1,200	34.0	1,200			
14	1,400	35.0	1,400			
15	1,200	-	1,200			
16	1,000	37.0	1,000	–	–	Over a dry prairie.
17	1,600	32.0	1,600			
18	2,800	-	2,800			
19	1,200	34.0	1,200			
20	1,200	39.0	1,200			
21	4,800	4.0	4,800			
22	5,200	10.0	1,200	4,000	9,000	To Butler's point.
23	8,200	5.2	8,200			
24	6,200	10.2	6,200			
25	23,000	-	23,000			
26	8,600	7.4	8,600	–	–	Over a dry prairie.
27	4,600	-	4,600			
28	6,700	14.0	6,700			

NORTHERN CROSS RAILROAD—Continued.

TABLE No. 9—Continued.

No. of the grades.	Length of the grades, in feet.	Inclination of the grades per mile, in feet and hundredths	No. of feet of straight line.	No. of feet of curved line.	Radii of the curves.	Remarks.
29	7,875	10.4	7,875			
30	5,075	3.1	5,075	–	–	Over a dry prairie.
31	6,750	-	6,750			
32	15,950	2.1	15,950			
33	9,655	9.3	7,655	2,000	20,000	Passes Sydney.
34	7,400	-	7,400			
35	5,750	23.8	5,750			
36	3,325	-	3,325			
37	5,300	39.8	5,300			
38	6,300	33.5	6,300			
39	5,500	3.9	5,500			
40	3,850	23.5	3,850			
41	8,050	22.9	8,050			
42	4,450	24.9	4,450			
43	5,650	6.5	5,650			
44	10,200	22.7	10,205			
45	5,500	9.6	5,500			
46	8,150	15.5	8,150			
47	6,150	18 8	6,150	–	–	Over a dry prairie.
48	3,350	5.2	3,350			
49	8,900	5.9	8,900			
50	24,200	3.9	24,200			
51	10,250	4.1	10,250			
52	28,000	6.7	28,900			
53	4,450	9.5	4,450			
54	5,650	-	4,650			
55	5,600	9.0	5,600			
56	11,700	7.2	11,700			
57	4,250	-	4,250			
58	7,800	39.3	7,800			
59	17,275	6.7	17,275			
60	9,350	9.1	9,350			
61	5,650	40.0	5,650	–	–	Descends to Sangamon river.
62	600	-	600	–	–	Passes Sangamon river.
63	3,850	37.1	3,850	–	–	Ascends from Sangamon river.
64	4,200	25.1	4,200			
65	4,900	21.5	4,900			
66	4,500	24.6	4,500			
67	4,000	29.0	4,000	–	–	To Decatur village.

TABLE No. 10—DIVISION 1, *extending from the State line to Danville.*

Tables No. 10, 11, 12, 13, and 14, exhibit the number and lengths of the sections on the 1st, 2d, 3d, 4th, and 5th divisions, extending from the State line to Decatur—the cubic yards of excavation put into embankment, and wasted in spoil-banks—of borrowed earth—perches of stone work—square rods of grubbing and clearing—lineal feet of bridging—wooden culverts—sundries—and the price and amount of each, and total of all.

No. of sections.	Length of the sections, in feet.	Cubic yards excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	No. of wooden culv'ts.	Price for each.	Amount.	Number of rods of grubbing and clearing.	Price per rod.	Amount.	Sundries—sodding & ditching.	Total amount.
			cts			cts			cts						$				cts			
1	5,200	3,639	26	$961 74	3,458	12	$414 96	3,590	12	$420 00	-	-	-	1	45	$45 00	-	-	-	$175	$2,016 70
2	5,000	2,814	24	675 36	-	-	-	9,463	13	1,230 19	85	$5	$425 00	1	45	45 00	-	-	-	100	2,475 55
3	5,000	2,082	24	499 68	-	-	-	13,838	13	1,798 94	-	-	-	1	45	45 00	-	-	-	100	2,443 62
4	6,000	4,998	25	1,249 50	-	-	-	12,887	13	1,675 31	-	-	-	1	45	45 00	-	-	-	100	3,069 81
5	4,300	4,736	24	1,136 64	4,519	13	586 30	2,500	13	325 00	-	-	-	1	45	45 00	676	50	$338 00	100	2,530 94
6	5,000	9,109	24	2,186 16	-	-	-	5,107	13	663 91	-	-	-	1	45	45 00	1,470	50	735 00	75	3,705 07
7	4,000	5,930	24	1,423 20	17,331	13	2,253 03	-	-	-	-	-	-	2	45	90 00	1,176	50	588 00	100	4,454 23
8	4,000	18,870	25	4,717 50	3,773	13	490 36	4,200	14	588 00	204	5	1,020 00	1	45	45 00	1,176	50	588 00	-	7,448 86
9	4,500	3,734	24	896 16	-	-	-	7,085	14	991 90	150	5	750 00	2	45	90 00	1,323	50	661 50	-	3,389 56
10	4,600	7,775	25	1,943 75	-	-	-	34,538	14	4,835 32	215	5	1,075 00	1	45	45 00	764	50	382 00	-	8,281 07

TABLE No. 11—DIVISION 2, *extending from Danville westerly.*

No. of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	No. of wooden culv'ts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per rod.	Amount.	Sundries—sodding & ditching, &c.	Total Amount.
			cts	$		cts	$		cts	$		$	$		$	$		$	$		cts	$	$	
11	6,250	75,100	28	21,028 00	9,000	18	1,620 00	–	–	–	5,100	6½	33,150	400	26	10,400	–	–	–	500	62½	312 50	* 8,900	$82,810 50
											1,000	5	5,000	300	8	2,400								
12	6,000	5,623	28	1,574 44	12,000	18	2,160 00	5,418	20	1,083 60	–	–	–	–	–	–	2	75	150	800	62½	500 00	‡ 5,500	10,968 04
13	5,400	1,197	19	227 43	–	–	–	18,879	16	3,020 64	–	–	–	–	–	–	2	75	150	–	–	–	150	3,548 07
14	6,150	7,248	19	1,376 93	3,035	12	364 20	–	–	–	–	–	–	–	–	–	2	60	120	–	–	–	100	1,961 13
15	6,090	3,100	19	589 00	–	–	–	1,654	12	198 48	–	–	–	–	–	–	2	60	120	–	–	–	100	1,007 48
16	7,257	5,810	19	1,103 90	1,000	12	120 00	1,404	12	168 48	110	5	550	–	–	–	2	60	120	–	–	–	125	2,137 38
17	4,810	2,596	19	493 24	–	–	–	1,747	12	209 64	–	–	–	–	–	–	1	60	60	–	–	–	100	862 88
18	6,000	3,030	19	575 70	700	12	84 00	5,002	12	600 24	–	–	–	–	–	–	2	60	120	–	–	–	125	1,504 94
19	6,000	2,897	19	550 43	1,900	12	120 00	2,547	12	305 64	–	–	–	–	–	–	2	60	120	–	–	–	100	1,196 07
20	6,000	1,032	19	196 08	–	–	–	8,019	12	962 28	–	–	–	–	–	–	3	60	180	–	–	–	100	1,438 36
21	6,000	4,666	19	886 54	2,000	12	240 00	5,681	12	681 72	–	–	–	–	–	–	1	60	60	–	–	–	100	1,968 26
22	6,000	7,359	19	1,398 21	–	–	–	8,405	12	1,008 60	–	–	–	–	–	–	2	60	120	–	–	–	100	2,626 81
23	5,600	2,799	19	531 81	–	–	–	8,588	12	1,030 56	–	–	–	–	–	–	2	60	120	–	–	–	125	1,807 37
24	5,300	3,097	19	588 43	800	12	96 00	5,052	12	606 24	–	–	–	–	–	–	2	60	120	–	–	–	100	1,510 67
25	5,300	5,144	19	977 36	1,987	12	238 44	–	–	–	–	–	–	–	–	–	1	60	60	–	–	–	100	1,375 80
26	5,800	4,039	19	767 41	–	–	–	2,059	12	247 08	–	–	–	–	–	–	4	60	240	–	–	–	100	1,354 49

* Bridge foundations, trestles and bolsters, and painting and clapboarding bridge.

‡ Road bridge.

TABLE No. 12—DIVISION 3, *passing Sydney.*

Number of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	No. of wooden culverts.	Price for each.	Amount.	Sundries—sodding and ditching, &c.	Total Amount.
			cts			*cts*			*cts*									
27	8,000	7,709	26	$2,004 34	–	–	–	1,066	14	$149 24	–	–	–	1	$60	$60 00	$100	$2,313 58
28	5,300	1,518	25	379 50	3,056	14	$427 84	5,000	14	700 00	–	–	–	3	60	180 00	200	1,887 34
29	5,000	2,082	24	499 68	–	–	–	11,771	14	1,647 94	–	–	–	1	60	60 00	100	2,307 62
30	6,000	5,000	26	1,300 00	4,935	13	641 55	13,287	13	1,727 31	100	$5	$500 00	2	60	120 00	100	4,388 86
31	6,000	2,211	24	530 64	–	–	–	11,398	13	1,481 74	–	–	–	1	60	60 00	100	2,172 38
32	7,000	3,647	24	875 28	–	–	–	9,939	14	1,391 46	–	–	–	1	60	60 00	*400	2,726 74
33	5,000	3,400	26	884 00	3,200	14	448 00	6,800	14	952 00	–	–	–	2	60	120 00	100	2,504 00
34	7,000	4,000	25	1,000 00	–	–	–	11,307	14	1,582 98	120	5	600 00	–	–	–	100	3,282 98
35	5,000	2,142	25	535 50	–	–	–	10,562	14	1,478 68	–	–	–	2	60	120 00	100	2,234 18
36	6,000	1,820	26	473 20	4,044	14	566 16	6,000	14	840 00	–	–	–	3	60	180 00	125	2,184 36
37	7,000	2,814	26	731 64	–	–	–	16,448	13	2,138 24	–	–	–	1	60	60 00	100	3,029 88
38	6,500	6,842	25	1,710 50	1,732	14	242 48	3,972	14	556 08	90	5	450 00	–	–	–	100	3,059 06
39	5,000	1,866	26	485 16	–	–	–	10,953	14	1,533 42	–	–	–	1	60	60 00	100	2,178 58
40	5,000	2,217	25	554 25	2,000	14	280 00	4,800	14	672 00	90	5	450 00	2	60	120 00	*400	2,476 25
41	7,200	3,362	28	941 36	–	–	–	5,248	14	734 72	–	–	–	–	–	–	175	1,851 08
42	6,000	862	25	215 50	1,000	14	140 00	6,663	14	932 82	–	–	–	3	60	180 00	125	1,593 32
43	6,500	2,000	25	500 00	3,574	14	500 36	5,070	14	709 80	90	5	450 00	2	60	120 00	150	2,430 16

* Road crossing.

TABLE No. 13—DIVISION 4, *located between Sadorns' grove and the timber adjacent to Sangamon river.*

No. of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Number of wooden culverts.	Price for each.	Amount.	Sundries—sodding and ditching, &c.	Total amount.
			cts			*cts*			*cts*			$						
44	6,000	1,732	25	$433 00	-	-	-	7,850	14	$1,099 00	-	-	-	2	$60	$120 00	$475*	$2,127 00
45	5,300	-	-	-	-	-	-	16,011	14	2,241 54	-	-	-	1	60	60 00	150	2,451 54
46	6,000	1,265	25	316 25	-	-	-	8,255	14	1,155 70	-	-	-	2	60	120 00	150	1,741 95
47	5,500	4,887	26	1,270 62	1,266	14	$177 24	4,425	14	633 50	90	5	$450 00	1	60	60 00	400†	2,991 36
48	6,000	399	25	99 75	-	-	-	16,993	13	2 209 09	-	-	-	1	60	60 00	100	2,468 84
49	5,000	756	25	189 00	1,924	13	250 12	9,000	14	1,260 00	-	-	-	2	60	120 00	150	1,969 12
50	6,000	649	26	168 74	-	-	-	22,907	13	2,977 91	-	-	-	2	60	120 00	125	3,391 65
51	6,500	1,638	26	425 88	3,598	14	503 72	8,351	14	1,169 14	-	-	-	2	60	120 00	100	2,318 74
52	6,000	2,000	24	480 00	-	-	-	16,256	14	2,275 84	-	-	-	1	60	60 00	100	2,915 84
53	5,500	-	-	-	-	-	-	15,508	14	2,171 12	90	5	450 00	-	-	-	100	2,721 12
54	5,800	-	-	-	-	-	-	16,608	14	1,325 12	-	-	-	1	60	60 00	100	2,485 12
55	6,000	2,948	25	737 00	-	-	-	13,485	14	1,887 90	-	-	-	1	60	60 00	100	2,784 90
56	7,000	5,175	25	1,293 75	-	-	-	5,525	13	718 25	-	-	-	2	60	120 00	100	2,232 00
57	5,000	3,488	25	872 00	-	-	-	6,525	14	913 50	-	-	-	2	60	120 00	175	2,080 50
58	7,000	4,978	26	1,293 28	7,492	14	1,048 88	1,000	14	140 00	-	-	-	1	60	60 00	100	2,643 16
59	5,000	-	-	-	-	-	-	10,000	14	1,400 00	-	-	-	2	60	120 00	150	1,670 00

*Road crossing and sodding and ditching. †Grubbing and clearing.

TABLE No. 14—DIVISION 5, *extending to Decatur.*

No. of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Linear feet of bridging.	Price per foot.	Amount.	No. of wooden culverts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per yard.	Amount.	Sundries—sodding &c. ditching, &c.	Total amount.
		cts				cts			cts						cts			$			cts			
60	6,300	1,488	25	$372 00	-	-	-	6,824	12	$887 12	-	-	-	-	-	-	1	100	100	560	-	-	$175	$1,494 12
61	7,000	3,680	25	920 00	-	-	-	6,700	12	871 00	-	-	-	-	-	-	1	60	60	120	-	-	150	2,101 00
62	6,000	2,381	25	595 25	-	-	-	4,599	13	597 87	-	-	-	-	-	-	1	60	60	180	-	-	150	1,523 12
63	6,500	1,220	26	317 20	-	-	-	9,924	12	1,190 56	-	-	$450	-	-	-	-	-	-	-	-	-	100	2,058 08
64	7,000	2,826	26	734 76	-	-	-	3,055	13	397 15	-	-	-	-	-	-	2	80	160	120	-	-	150	1,401 91
65	5,500	4,711	25	1,177 75	-	-	-	9,352	12	1,146 28	-	-	-	-	-	-	1	60	60	60	-	-	125	2,508 99
66	8,000	3,000	28	840 00	7,126	12	$855 12	8,059	13	1,046 36	-	-	-	-	-	-	1	60	60	60	-	-	200	3,001 62
67	3,400	1,982	24	259 68	-	-	-	6,815	13	885 95	100	5	500	-	-	-	-	-	-	120	-	-	100	1,865 63
68	6,000	1,521	24	365 04	-	-	-	4,465	13	580 47	-	-	-	-	-	-	-	-	-	-	-	-	*350	1,295 49
69	5,000	1,948	24	467 52	-	-	-	7,584	13	985 97	-	-	-	-	-	-	1	50	150	-	-	-	*350	2,056 94
70	7,000	6,165	26	1,602 90	-	-	-	10,381	14	1,453 34	-	-	-	-	-	-	2	50	250	407 50	-	$363 50	-	4,185 24
71	5,000	6,362	26	1,628 90	2,000	13	260 00	4,977	14	696 78	-	-	-	-	-	-	-	-	-	2,655 50	-	1,029 00	-	2,420 68
																				1,170 50	-	735 00		
72	7,000	37,938	33	6,445 75	-	-	-	194,069	17	32,991 75	1,200	6	7,200	200	25	$5,000	1	1,600	1,600	-	-	529 00	+2,500	56,246 47
														200										
73	7,000	11,338	26	2,946 58	3,944	12	353 28	9,000	14	1,260 00	300	4½	1,350	-	-	-	-	-	-	74 50	-	370 00	-	6,259 86
74	5,500	1,964	26	510 64	1,935	12	232 20	6,256	13	813 28	100	4	400	-	-	-	-	-	-	-	-	-	-	2,056 12
75	6,000	1,747	26	451 22	-	-	-	18,536	13	2,409 68	145	4	580	-	-	-	-	-	-	100	-	347 50	-	3,891 40

*Road crossing. +Bridge foundations, and for trestle and bolster frames.

TABLE No. 15.

The Superstructure.

An exhibit of the number and lengths of the divisions—lineal feet of stringers and mud-sills—number of sleepers and keys—tons of rail-way iron—pounds of spikes and plates—the price and amount of each, delivered upon the road every two hundred feet—rods of rail-laying—with the price and amount, and total of all.

No. of the divisions.	Length of the divisions, in feet.	Lineal feet of string-pieces.	Price per ft.	Amount.	Lineal feet of mud-sills.	Price per ft.	Amount.	Number of sleepers.	Price for each	Amount.	No. of keys.	Price for each	Amount.
			cents.			*cents.*			*cents.*			*cents.*	
1	47,600	95,200	4.6	$4,379 20	119,000	4	$4,760 00	10 021	16	$1,603 36	20,042	2	$400 84
2	93,957	187,914	4.5	8,456 13	234,892	3.8	8,925 89	19,780	16	3,164 80	39,560	2	791 20
3	103,400	206,800	5.5	11,374 00	258,500	4.5	11,632 50	21,768	20	4,353 60	43,536	2	870 72
4	93,600	187,200	5.5	10,296 00	234,000	4.5	10,530 00	19,726	20	3,945 20	39,452	2	789 04
5	100,200	200,400	5	10,020 00	250,500	4	10,020 00	21,095	16	3,375 20	42,190	2	843 80

The Superstructure—Continued.

No. of the divisions.	Tons of rails.	Price per ton.	Amount.	Pounds of spikes.	Price per lb.	Amount.	Pounds of plates.	Price per lb.	Amount.	Rods of rail-laying.	Price per rod, including the filling of track.	Amount.	Total am't.
					cents.			*cents.*					
1	198	$100	$19,800 00	8,766	15	$1,314 90	3,526	11	$387 86	2,885	$4	$11,540 00	$44,186 16
2	391	100	39,100 00	17,303	15	2,595 45	6,959	11	765 49	5,693	4	22,772 00	86,570 96
3	431	100	43,100 00	19,042	15	2,856 30	7,659	11	842 49	6,266	4	25,064 00	100,093 61
4	390	100	39,000 00	17,238	15	2,585 70	6,933	11	762 63	5,677	4	22,708 00	90,616 57
5	417	100	41,700 00	18,453	15	2,767 95	7,422	11	816 42	6,072	4	24,288 00	93,831 37

RECAPITULATION OF THE NORTHERN CROSS RAILROAD.—Table No. 16.

The Grades and Curvatures.

No. of the grades.	Total length.	Mean inclination per mile, in feet and hundredths.	Number of feet of straight line.	Number of feet of curved line—the radii of the curves from 3,000 to 20,000 feet.
67	438,757	15.2	430,757	8,000

The Graduation.

No. of the divisions.	Length of divisions, in feet.	Cub. y'ds exc. put in embank't.s	Amount.	Cubic y'ds wasted in spoil-b'ks.	Amount.	Cubic y'ds borrowed earth.	Amount.	Perches of masonry.	Amount.	Lineal feet bridging.	Amount.	No. wooden culv'ts.	Amount.	No. of rods grubbing & clearing.	Amount.	Am't for sundries.	Total am't.
1	47,600	63,747	$15,689 69	29,071	$3,744 65	93,118	$12,528 57	654	$3,270	–	–	12	$540	6,585	$3,292 50	$750	$39,815 41
2	93,957	134,736	32,864 91	31,522	5,042 64	74,455	10,123 20	6,210	38,700	700	$12,800	30	1,860	1,300	812 50	15,935	118,128 25
3	103,400	53,492	13,620 55	23,541	3,246 39	140,284	19,228 43	490	2,450	–	–	25	1,500	–	–	2,575	42,620 37
4	93,600	29,915	7,580 27	14,280	1,979 96	178,799	24,577 61	180	900	–	–	23	1,380	–	–	2,575	38,992 84
5	100,200	79,269	19,618 18	14,005	1,700 60	310,787	48,213 89	1,935	10,480	400	6,600	21	1,170	6,428	3,214 00	4,350	95,346 67
	438,757	361,159	89,373 60	112,419	15,714 24	797,443	114,671 70	9,469	55,800	1,100	19,400	111	6,450	14,313	7,319 00	26,175	334,903 54

The Superstructure.

Total length of the road, in feet.	Lineal feet of stringers.	Amount.	Lineal feet of mud-sills.	Amount.	Number of sleepers.	Amount.	Number of keys.	Amount.
438,757	877,514	$44,525 33	1,096,893	$45,868 39	92,390	$16,442 16	184,780	$3,695 60

Superstructure—Continued.

Tons of rails.	Amount.	Pounds of spikes.	Amount.	Pounds of plates.	Amount.	Rods of rail laying.	Amount.	Total amount.
1,827	$1,827 00	80,802	$12,120 30	32,499	$3,574 89	26,593	$106,372 00	$415,298 67

Summary of Estimates of the Northern Cross Railroad.

TABLE No. 17.

Of the graduation - - - -	$334,903 54	=	$4,030 20 per mile.
Of the superstructure, including the gravelling of the railway - - - - -	415,298 67	=	4,997 70 per mile.
Two Depots, one at Danville and one at Decatur - - - - - -	16,000 00		
Land, damage, and depot ground - -	7,500 00		
Engineering and contingencies connected therewith - - - - - - -	10,000 00		
Total estimate of the Northern Cross Railroad, from the east line of the State to Decatur	783,702 21	=	9,431 06 per mile.

CENTRAL RAILROAD.

TABLE No. 18.

An exhibit of the Grades and Horizontal Curvatures, from Decatur to Vandalia.

No. of the grades.	Length of the grades, in feet.	Inclination of the grades per mile, in feet and hundredths.	Number of feet of straight line.	Number of feet of curved line.	Radii of the curves.	Remarks.
1	5,600	40.0	5,600	–	–	Descends to Sangamon river.
2	500	–	500	–	–	Passes Sangamon river.
3	9,300	40.0	9,300	–	–	Ascends from Sangamon river.
4	2,200	12.0	2,200			
5	4,800	16.0	4,800	–	–	Passes Springfield road.
6	5,450	3.0	3,550	1,900	6,000	Passes Shelbyville road.
7	16,000	3.5	15,500	500	6,000	
8	15,300	3.0	15,300			
9	4,700	–	4,700			
10	6,800	10.6	6,800			
11	11,800	5.3	11,800			
12	7,000	3.7	7,000			
13	6,600	3.2	6,600	–	–	Passes the summit between Decatur and Shelbyville.
14	11,600	12.2	11,600			
15	3,600	8.8	3,600			
16	6,700	15.0	6,700			
17	4,700	3.3	4,700			
18	6,800	6.9	6,800	–	–	Passes Robinson's creek.
19	7,000	5.2	7,000	–	–	Passes a branch of Robinson's creek.
20	7,750	24.1	7,750			
21	9,300	5.6	9,300			
22	7,000	12.0	7,000			
23	5,000	24.2	3,000	2,000	3,000	To Shelbyville.
24	2,200	12.0	200	2,000	3,000	
25	2,000	23.7	2,000			
26	6,200	35.5	6,200			
27	11,000	24.0	8,400	2,600	4,000	
28	4,200	36.4	4,200	–	–	Passes Robinson's creek.
29	12,000	–	12,000			
30	10,600	10.0	9,800	800	7,600	
31	7,000	15.1	7,000			
32	5,600	5.6	5,600			
33	3,900	27.0	3,900			
34	3,600	–	3,600			
35	3,600	32.3	3,600			
36	5,200	24.9	5,200	–	–	Passes Hurricane creek.
37	13,600	6.9	13,600			
38	4,000	31.7	4,000			
39	5,600	33.7	5,600	–	–	Passes Ramsay's creek.
40	3,000	29.9	3,000			
41	2,400	–	2,400	–	–	Passes Beck's creek.
42	7,400	40.0	7,400			
43	9,600	18.8	9,600			
44	8,300	26.8	8,300			
45	4,900	7.5	4,900			
46	10,900	22.3	10,900			
47	10,100	2.7	10,100			
48	7,700	12.3	7,700			
49	9,700	2.7	7,400	2,300	4,400	
50	5,100	18.6	3,800	1,300	4,400	
51	4,800	31.8	4,800			
52	2,800	5.0	2,800			
53	4,600	22.0	4,600	–	–	To Vandalia.

TABLE No. 19—DIVISION 1, *extending from Decatur towards Shelbyville.*

Tables No. 19, 20, 21, and 22, exhibit the number and lengths of the 1st, 2d, 3d, and 4th divisions, extending from Decatur to Vandalia—the cubic yards of excavation put into embankment, and wasted in spoil-banks—of borrowed earth—perches of masonry—square rods of grubbing and clearing—lineal feet of bridging—wooden culverts—sundries—the price and amount of each, and the total of all.

No. of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	No. of wooden culverts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per rod.	Amount.	Sundries—sodding and ditching, &c.	Total amount.
			cts			cts			cts						$				$		cts		$	
1	4,500	10,660	24	$2,558 40	–	–	–	90,847	14	$12,718 58	70	$5	$350	–	–	–	1	60	$60	735	50	$367 50	–	$16,054 48
2	5,000	62,330	24	14,959 20	–	–	–	70,189	14	9,816 46	1,200	5	6,000	200 300	25 9	$5,000 2,700	–	–	–	1,470	50	735 00	*2,500	41,720 66
3	6,000	16,480	24	3,955 20	8,125	12	$975 00	–	–	–	200	5	1,000	–	–	–	2	60	120	1,176	50	588 00	–	6,518 20
4	7,000	2,330	25	582 50	2,000	13	260 00	5,545	12	665 40	–	–	–	–	–	–	–	–	–	–	–	–	100	1,727 90
5	6,000	–	–	–	–	–	–	40,685	12	4,882 20	650	5	3,250	–	–	–	2	60	120	–	–	–	100	8,232 20
6	6,000	3,361	25	840 25	3,000	13	390 00	4,599	12	551 88	–	–	–	–	–	–	2	60	120	–	–	–	150	2,052 13
7	5,000	866	25	216 50	–	–	–	8,114	12	973 68	–	–	–	–	–	–	2	60	120	–	–	–	150	1,460 18
8	5,000	2,660	25	665 00	–	–	–	7,688	12	922 56	–	–	–	–	–	–	1	60	60	–	–	–	100	1,807 56
9	7,000	2,196	25	549 00	3,000	13	390 00	3,257	11	358 27	–	–	–	–	–	–	1	60	60	–	–	–	100	1,457 27
10	6,000	1,299	24	311 76	–	–	–	7,681	12	921 72	–	–	–	–	–	–	1	60	60	–	–	–	100	1,393 48
11	6,000	2,110	25	527 50	1,000	13	130 00	7,442	12	893 04	–	–	–	–	–	–	1	60	60	–	–	–	100	1,710 54
12	7,000	2,500	25	625 00	2,696	13	350 48	7,480	12	897 60	–	–	–	–	–	–	1	60	60	–	–	–	100	2,033 08
13	6,000	2,000	24	480 00	2,336	13	303 68	6,220	12	746 40	–	–	–	–	–	–	1	60	60	–	–	–	100	1,690 08
14	6,000	1,730	24	415 20	–	–	–	5,543	12	665 16	–	–	–	–	–	–	1	60	60	–	–	–	100	1,240 36

*Bridge foundations and trestles.

TABLE No. 20—DIVISION 2, *extending to Shelbyville.*

No. of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	No. of wooden culv'ts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per rod.	Amount.	Sundries—scolding & ditching.	Total amount.
			cts			*cts*			*cts*						$				*cts*			
15	5,000	1,165	24	279 60	1,000	13	$130 00	7,730	13	$1,004 90	-	-	-	-	-	-	-	-	-	$200	$1,614 50
16	5,000	1,640	25	410 00	-	-	-	6,580	13	855 40	-	-	-	1	65	$65 00	-	-	-	125	1,455 40
17	5,000	3,110	25	777 50	-	-	-	8,830	13	1,147 90	-	-	-	2	65	130 00	-	-	-	175	2,230 40
18	5,000	-	-	-	-	-	-	12,475	12	1,497 00	-	-	-	1	65	65 00	-	-	-	100	1,662 00
19	6,000	6,643	25	1,660 75	-	-	-	8,731	12	1,047 72	-	-	-	1	65	65 00	-	-	-	175	2,948 47
20	6,000	1,596	24	383 04	-	-	-	6,374	13	828 62	-	-	-	1	65	65 00	-	-	-	100	1,376 66
21	5,000	2,520	28	705 60	-	-	-	2,810	14	393 40	-	-	-	1	65	65 00	-	-	-	200	1,364 00
22	5,000	1,500	25	375 00	-	-	-	16,802	12	2,016 24	220	$5	$1,100	-	-	-	1,205	50	$602 50	-	4,093 74
23	5,500	2,966	26	771 16	-	-	-	5,570	14	779 80	-	-	-	2	65	130 00	441	50	220 50	-	1,901 46
24	6,000	-	-	-	-	-	-	26,084	12	3,130 08	250	5	1,250	-	-	-	-	-	-	200	4,580 08
25	7,000	2,488	25	622 00	-	-	-	7,453	13	968 89	-	-	-	2	65	130 00	617	50	308 50	-	2,029 39
26	5,000	2,000	25	500 00	1,165	13	151 45	5,987	13	778 31	-	-	-	2	65	130 00	-	-	-	150	1,709 76
27	6,000	6,220	24	1,492 80	-	-	-	7,154	12	858 48	200	5	1,000	-	-	-	-	-	-	150	3,501 28
28	6,000	5,620	24	1,348 80	-	-	-	9,785	13	1,272 05	-	-	-	2	65	130 00	514	50	257 00	-	3,007 85
29	5,500	6,464	24	1,551 36	-	-	-	14,328	13	1,862 64	275	5	1,375	2	65	130 00	1,617	50	808 50	-	5,727 50

TABLE No. 21—DIVISION 3, *extending from Shelbyville towards Vandalia.*

Number of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	No. of wooden culverts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per rod.	Amount.	Sundries—sodding and ditching.	Total amount.
			cts			*cts*			*cts*									*cts*			
30	5,000	1,866	25	$466 50	–	–	–	4,764	12	$571 68	–	–	–	2	$50	$100	–	–	–	$200	$1,338 18
31	6,300	9,885	26	2,570 10	–	–	–	8,773	12	1,052 76	–	–	–	2	75	150	647	45	$291 15	100	4,164 01
32	5,900	10,998	25	2,749 50	3,612	12	$433 44	–	–	–	–	–	–	2	75	150	1,117	50	558 50	150	4,041 44
33	5,900	5,353	25	1,338 25	–	–	–	23,519	13	3,057 47	250	$5	$1,250	1	50	50	882	50	441 00	100	6,236 72
34	5,600	7,464	25	1,866 00	–	–	–	8,315	13	1,080 95	–	–	–	3	75	225	1,360	50	680 00	125	3,976 95
35	6,200	4,976	25	1,244 00	–	–	–	1,376	12	165 12	–	–	–	3	60	180	1,176	50	588 00	150	2,327 12
36	5,900	4,147	25	1,036 75	–	–	–	2,678	13	348 14	–	–	–	4	60	240	1,360	50	680 00	150	2,454 89
37	7,300	5,355	26	1,392 30	–	–	–	9,470	13	1,231 10	–	–	–	2	60	120	–	–	–	150	2,893 40
38	6,800	1,151	26	299 26	2,000	12	240 00	5,010	13	651 30	–	–	–	2	60	120	–	–	–	175	1,485 56
39	6,800	3,732	25	933 00	–	–	–	7,954	13	1,034 02	–	–	–	2	60	120	–	–	–	175	2,262 02
40	6,700	9,693	26	2,520 18	–	–	–	13,522	12	1,622 64	200	5	1,000	2	60	120	750	50	375 00	100	5,737 82
41	6,700	3,966	26	1,031 16	–	–	–	10,394	12	1,247 28	–	–	–	1	60	60	370	50	185 00	150	2,673 44
42	4,600	9,550	24	2,292 00	–	–	–	20,444	12	2,453 28	320	5	1,600	2	60	120	1,323	50	661 50	–	7,126 78
43	6,700	1,000	25	250 00	2,031	13	264 03	5,580	13	725 40	–	–	–	1	60	60	206	50	103 00	150	1,552 43
44	7,200	5,752	26	1,495 52	3,000	13	390 00	–	–	–	–	–	–	3	50	150	1,375	50	687 50	–	2,723 02

TABLE No. 22—DIVISION 4, *extending to Vandalia.*

No of the sections.	Length of the sections, in feet.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards wasted in spoil-banks.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Lineal feet of bridging.	Price per foot.	Amount.	No. of wooden culv'ts.	Price for each.	Amount.	No. of rods of grubbing and clearing.	Price per yard.	Amount.	Sundries—sodding & ditching, &c.	Total amount.
			cts			*cts*			*cts*			$			$			$			*cts*			
45	6,600	5,621	26	$1,461 46	–	–	–	21,874	12	$2,624 88	–	–	–	–	–	–	2	75	$150	764	50	$382 00	$50	$4,668 34
46	5,800	18,488	24	4,437 12	–	–	–	10,252	13	1,332 76	300	5	$1,500	2,800	7	$19,600	–	–	–	1,706	50	853 00	50	27,772 88
47	7,900	26,430	25	6,607 50	–	–	–	10,221	12	1,226 52	250	5	1,250	–	–	–	–	–	–	1,176	50	588 00	100	9,772 02
48	6,700	15,120	26	3,931 20	–	–	–	7,050	12	846 00	–	–	–	–	–	–	1	90	90	294	50	147 00	100	5,114 20
49	6,800	2,629	26	683 54	3,000	12	$360 00	6,442	13	837 46	–	–	–	–	–	–	1	60	60	1,676	50	838 00	50	2,829 00
50	6,800	14,350	24	3,444 00	–	–	–	15,000	13	1,950 00	300	5	1,500	800	7	5,600	–	–	–	1,176	50	588 00	50	13,132 00
51	7,300	20,551	24	4,932 24	–	–	–	5,032	13	654 16	–	–	–	600	6	3,600	2	60	120	882	50	441 00	100	9,847 40
52	5,400	16,932	25	4,233 00	–	–	–	11,145	12	1,337 40	–	–	–	–	–	–	2	80	160	353	50	176 50	*500	6,406 90
53	6,800	–	–	–	–	–	–	16,354	14	2,289 56	–	–	–	–	–	–	2	60	120	706	50	353 00	150	2,912 56
54	7,300	6,250	25	1,562 50	–	–	–	10,719	13	1,393 47	–	–	–	–	–	–	2	60	120	1,382	50	691 00	100	3,866 97
55	7,200	7,708	25	1,927 00	1,583	13	205 79	–	–	–	–	–	–	–	–	–	3	60	180	882	50	441 00	100	2,853 79
56	6,400	1,732	24	415 68	–	–	–	16,442	12	1,973 04	300	4	1,200	–	–	–	2	60	120	294	50	147 00	100	3,955 72
57	6,000	6,402	25	1,600 50	–	–	–	17,448	13	2,268 24	–	–	–	–	–	–	3	75	225	1,470	50	735 00	50	4,878 74
58	5,400	3,669	25	917 25	3,000	13	390 00	4,372	14	612 08	–	–	–	–	–	–	2	60	120	294	50	147 00	150	2,336 33
59	5,600	7,497	24	1,799 28	–	–	–	30,101	13	3,913 13	280	5	1,400	–	–	–	–	–	–	441	50	220 50	150	7,482 91

*Changing the course of Ramsay's creek, and sodding and ditching.

TABLE No. 23.

The Superstructure.

An exhibit of the number and lengths of the divisions—lineal feet of stringers and mud-sills—number of sleepers and keys—tons of rail-way iron—pounds of spikes and plates—the price and amount of each, delivered upon the road every two hundred feet—rods of rail-laying—with the price and amount, and total of all.

No. of the divisions.	Length of the divisions, in feet.	Lineal feet of stringers.	Price per ft.	Amount.	Lineal feet of mud-sills.	Price per ft.	Amount.	Number of sleepers.	Price for each	Amount.	No. of keys.	Price for each	Amount.
			cents.			*cents.*			*cents.*			*cents.*	
1	82,500	165,000	4.9	$8,085 00	204,250	4	$8,170 00	17,369	14	$2,432 66	34,738	2	$694 76
2	83,000	166,000	5.2	8,632 00	207,500	4.1	8,507 50	17,474	17	2,970 58	34,948	2	698 96
3	93,600	187,200	5	9,360 00	234,000	4	9,360 00	19,705	15	2,955 75	39,410	2	788 20
4	98,000	196,000	5	9,800 00	245,000	4	9,800 00	20,131	14	2,818 34	41,262	2	825 24

The Superstructure—Continued.

No. of the divisions.	Tons of rails.	Price per ton.	Amount.	Pounds of spikes.	Price per lb.	Amount.	Pounds of plates.	Price per lb.	Amount.	Rods of rail-laying.	Price per rod, including the filling of track.	Amount.	Total am't.
					cents.			*cents.*					
1	345	$100	$34,500 00	14,431	15	$2,164 65	6,111	11	$672 21	5,000	$4	$20,000 00	$76,718 28
2	346	100	34,600 00	15,284	15	2,292 60	6,148	11	676 28	5,030	4	20,120 00	78,497 92
3	390	100	39,000 00	17,238	15	2,585 70	6,933	11	762 63	5,672	4	22,688 00	87,500 28
4	408	100	40,800 00	18,044	15	2,706 60	7,259	11	798 49	5,939	4	23,756 00	91,304 67

RECAPITULATION OF THE CENTRAL RAILROAD.—Table No. 24.

The Grades and Curvatures.

No. of the grades.	Total length.	Mean inclination per mile, in feet and hundredths.	Number of feet of straight line.	Number of feet of curved line—the radii of the curves from 3,000 to 7,600 feet.
53	357,100	15.4	343,700	13,400

The Graduation.

No. of the divisions.	Length of the divisions, in feet.	Cub. yds excava. put into embank't.	Amount.	Cubic yards wasted in spoil-banks.	Amount.	Cubic yards of borrowed earth.	Amount.	Perches of masonry.	Amount.	Lineal feet of bridging.	Amount.	No. of wooden culverts.	Amount.	No. of rods of grubbing & clearing.	Amount.	Amount for sundries.	Total am't.
1	82,500	110,422	$26,685 51	22,157	$2,799 16	265,290	$35,022 95	2,750	$10,600	500	$7,700	15	$900	3,381	$1,690 50	$3,700	$89,098 12
2	83,000	43,932	10,877 61	2,165	281 45	146,693	18,441 43	945	4,725	–	–	17	1,105	4,394	2,197 00	1,575	39,202 49
3	93,600	84,888	21,484 52	10,643	1,327 47	121,799	15,241 14	770	3,850	–	–	32	1,965	10,566	5,250 65	1,875	50,993 78
4	98,000	153,379	37,952 27	7,583	955 79	182,452	23,258 70	1,430	6,850	4,200	28,800	22	1,465	13,496	6,748 00	1,800	107,829 76
	357,100	392,621	96,999 91	42,548	5,363 87	716,234	91,964 22	5,895	26,025	4,700	36,500	86	5,435	31,837	15,886 15	8,950	287,124 15

The Superstructure.

Total length of the road, in feet.	Lineal feet of stringers.	Amount.	Lineal feet of mud-sills.	Amount.	Number of sleepers.	Amount.	Number of keys.	Amount.
357,100	714,200	$35,877 00	892,750	$35,837 50	75,179	$11,176 33	150,358	$3,007 16

Superstructure—Continued.

Tons of rails.	Amount.	Pounds of spikes.	Amount.	Pounds of plates.	Amount.	Rods of rail laying.	Amount.	Total amount.
1,489	$148,900 00	64,997	$9,749 55	26,451	$2,909 61	21,641	$86,564 00	$334,021 15

Summary of Estimates of the Central Railroad.

TABLE No. 25.

Of the graduation - - - -	$287,124 15 =	$4,245 12 per mile.
Of the superstructure, including the gravelling of the railway - - - -	334,021 15 =	4,938 38 per mile.
Depot at Vandalia, and for enlargement of the depots at Shelbyville and Decatur - -	18,000 00	
Land, damage, and depot ground - -	6,000 00	
Engineering and contingences connected therewith - - - - - -	10,000 00	
Total estimate of the Central Railroad, from Decatur to Vandalia - - -	655,145 30 =	9,686 68 per mile.

I have now given the results of the surveys authorized by the Legislature in the eastern engineering district. The locations must be regarded as approximate; and although the definite lines will differ but little from them, yet by careful locations of bridges and accurate adjustments of grades, the expense of construction can be materially reduced.

The estimates are based on the cost of labor and materials at the present time, and the prices for which a portion of the work has been contracted, and cannot fail, by judicious management, to cover the expense of constructing the roads. In some instances it may be advisable to change the manner of construction, to conform to the resources of the country as developed in the progress of the works; and, should there be much difficulty in procuring suitable rock for constructing stone culverts, I would recommend cast-iron pipes to be substituted. Doubtless many other changes, both judicious and economical, can be made, the utility of which time can alone determine.

The plans and profiles are compiled from actual surveys, and, by referring to the explanatory tables annexed to them, can be readily comprehended.

Allow me, ere I close this report, to tender to the acting Commissioner under whose directions the surveys have been made, and to your honorable Board, my thanks for the confidence reposed in my integrity and judgment; and, hoping it contains all the information desired,

I am, gentlemen, with much esteem,

Your obedient servant,

ARTHUR W. HOYT,

Engineer for the Eastern Engineering District, State of Illinois.

REPORT

ON

THE JOINT IMPROVEMENT

OF THE

WABASH RIVER.

JANUARY 25, 1839.

Read, laid on the table, and ordered to be printed with the Report of the Commissioner of the Fourth Judicial Circuit.

VANDALIA, *January* 25, 1839.

To the Hon. the SPEAKER
of the House of Representatives.

SIR: In obedience to a resolution of the House of Representatives, and in accordance with the promise in my communication to your body of the 15th instant, I herewith transmit a copy of the report of D. Burr, Esq., principal engineer of the States of Indiana and Illinois, on the Great Wabash river improvement From a thorough examination of this able document, the practicability and utility of a vigorous prosecution of the improvement will not be doubted: and as that river meanders several hundred miles through the most rich and fertile country in the valley of the Mississippi, rapidly populating with an industrious and enterprising part of the community, it is useless to recommend that the Hon. the Legislature of Illinois would adopt efficient measures to effect the speedy completion of a work so conducive to the interest and prosperity of both this State and that of her sister, Indiana.

I have the honor to be, sir,
Very respectfully,
Your obedient servant,
WILLIAM KINNEY,
President B. P. W.

General M. K. Alexander,
Acting Commissioner of the Fourth Judicial Circuit.

Sir: After long delay, on account of ill health, I herewith submit a report of the operations on the Wabash, under my charge, during 1838.

Respectfully,

D. BURR,
Principal Engineer Wabash River.

Mount Carmel, *January* 16, 1839.

Messrs. Thomas H. Blake and M. K. Alexander,
Commissioners of the States of Illinois and Indiana.

Gentlemen: The delivery of the stone for the lock and dam at the Grand rapids of the Wabash was contracted for in November, 1837, with Messrs. Wilson & Co., and Chapman & Co., to have been completed by the first of June last. The same persons constituted the two firms or companies, and agreed to deliver 3,500 cubic yards of stone each, at $8 33¼ and $8 25 per cubic yard.

They procured a steamboat and twelve flatboats, 80 feet long by 18 feet wide. The time taken to build these consumed so large a portion of the spring floods, that, with failure and unexpected difficulties at the quarry, they delivered only 820 yards.

On the 22d of August the dam and lock were let in separate contracts, the former to Messrs. Baker, Riley & Co., the latter to William Madge. The terms of the letting stipulated that the contractors for the lock should take the quantity of stone, delivered at the site, at the same price which had been paid for them by the States. Proposals were received for separate prices for the masonry in the lock and abutment, based on the contingency of the stone used in their construction being procured from a quarry in the upper part of Martin county, from the quarry at Portersville, and from the quarry at Petersburg, all of which are situated on White river, at the distance of 50, 80, and 135 miles from the site of the works.

The prices at which the contracts have been taken have exceeded the estimate originally suggested as the probable cost of the works, owing to the known probability of quarries, in this part of the country, becoming of little or no value after they are worked back a short distance into the earth, and from a change of plan in having the masonry laid in hydraulic cement instead of mortar and grout formed of common lime, as originally contemplated, which increases the expense something over 10,000 dollars.

It is intended to procure limestone from the quarry in Martin county, which is of the best kind, for the faces of the walls of the lock and abutment and for headers which constitute their bond; and for their interior portions which will be shielded from frost and sudden alternations from heat to cold, to use the sand stone in the vicinity of the works, which is of a tolerable quality, can be cheaply obtained, and which, in the places where it will be used, will be permanent—and in that manner to keep the cost of the works within the gross sum of $185,000

It was not deemed expedient to permit the timber for these works to be cut before the 15th of December. Messrs. Baker, Riley, & Co., are making contracts for the deliveay of the timber for the dam.

Mr. Mudge, contractor for the lock, has opened the quarries, keeps a small force at work at them, is contracting for boats, and making preparations for the progress of his work with the first rise of the waters and the opening of the spring. No money has been paid on the new contracts, or materials been delivered under them.

In accordance with your instructions to survey the Wabash river from the Grand rapids to its mouth, and, in the event of its impracticability or inexpediency for improvements for uninterrupted steamboat navigation by continuous locks and dams, to survey a canal route from New Harmony, on the Wabash, to Mount Vernon on the Ohio river, a party was organized on the 8th of September to perform that service, and entered immediately after on their labors in the field.

The obstructions to the navigation are the rocky bars extending across the bed of the river at the points of its greatest descent; flat sundry shoals, where the volume of the river is distributed over a large area of surface and diminished in depth; and not the least difficult or hazardous are the snags, old trees and stumps imbedded in the channel in many places, but more especially in the Piankeshaw bend, in the bend below Fox river, in the bend below the Little Chain, in Black's cut-off, and in the first three miles of the Wabash next the Ohio.

The rock bars are—

First. The shoals immediately below the mouth of White river; fall one foot nearly in five hundred feet in length, and affording two feet water over the highest rocks.

Second. The Coffee island rapids, descent, in half a mile, three feet—the Island chute, on the Indiana side, having but one foot water over the rocks in the steamboat channel.

Third. Warrick's ripple. Here the water falls one foot in the length of five hundred feet, and runs with accumulated velocity over an uneven bed of sand stone rock, the points of which impede the passage of boats, and render the channel crooked and difficult to keep. The highest points of rock are within one foot of the surface in low water, and although one or more channels of two feet, and of sufficient width for any boat, may be found, the serpentine course they pursue, with the strength of the current, requires an intimate knowledge and much skill of the navigation to pass boats safely of that draught.

Fourth. The Grand Chain, seven miles by the river below Warrick's ripple, forms the next obstruction, and, after Coffee island, the most serious from White river to the Ohio. At the stage of water when the exploration was made, the descent was four feet fall in the distance of four hundred feet. The water runs this distance along the pier erected by Messrs. Gardner and Mundy with great violence, and has a depth from two to four feet, except a single rock in the channel, presenting a surface of about twelve feet square, on which there was one foot five inches water.

Fifth. The Little Chain, five and one-half miles below the Grand Chain, by the river, is the last of the rock bars of the Wabash. Detached rocks render the channel crooked, but boats are seldom injured or de-

tained at this point. The water runs with a strong current, and is two and a half feet deep—descent two feet in one-fourth of a mile. The excavation of a small quantity of separated masses of rock to straighten the channel, and the removal of a few detached rocks, is all that is necessary to overcome the obstacles presented at this point.

There was no sand-bar or shoal composed of gravel and sand in the Wabash river, when the examinations were made, which did not afford two feet depth of water over spaces wide enough for the egress of boats; and from the unusual prevalence of drought the river cannot reasonably be expected to be found in a lower stage.

The locations of the sand-bars are–First: A sand-bar between Graysville and New-Harmony, opposite Black's and head of Fox river. Second: Gravel and sand-bar, short distance below the head of New-Harmony cut-off. Third: Wincler's bar, near the foot of the cut-off, formed of light sand. Fourth: Sand and gravel bar one and a half miles below the Grand Chain. Fifth: Sand and gravel-bar at Wright's, above mouth of Little Wabash. Sixth: Skidmore's bar, composed of sand, three miles above the mouth of the Ohio.

On no other points would there have been difficulty in navigating boats of two and a half and probably of three feet draught.

Some laws, or general principles, appear to govern the deposition of the sand and earthy matter throughout the whole extent of the river.

In portions of it where the bed is serpentine, as compared with its general direction—where the current near the bottom of the river, in floods, is forced by the direction of the banks to pursue courses varying and diverging from the general course of the current near the surface, which, by overflowing the banks, moves in a straighter direction—the revulsion of the water against the banks near the the bottom, by communicating a boiling agitation to the great mass of the current, operates with so much effect on the light material of the bed of the river, that, in all such portions, the Wabash has a depth from six to ten feet. Shoals are nowhere found in the bends of the river nor where its width is compressed into less than 700 feet.

Large quantities of sand and earth are carried down in the floods and deposited on the bars. The abrasion of the banks takes place at the bottom of bends where they stand perpendicularly to the surface. Sloping banks do not wash. Bars that are formed on one side of the river, and which are slightly elevated towards the bank, become places of deposite for the sand and earth removed in floods.

Wherever the water runs over a bed inclined towards one of its banks, the bank so situated is operated on by the water lying against it in a wedge-like shape; the bottom is then undermined—the incumbent mass falls in; and as the specific gravity of the alluvial formation of the banks exceeds but slightly that of the water, it is easily removed to the place where it subsides.

Those bars which, from any cause, obtain but a slight elevation on the side next the shore, increase rapidly in height and size. The highest bars receive the largest additions of the annual deposites, and appear as if they must increase in size and encroach on the opposite bank until, in their turn, they will be cut off by the bends above and below them.

The channels on the flat sandy bars change frequently from one side

to the other of the river, but seldom change position in the direction of the stream. The bars near the head of the Harmony cut-off, at Wincler's, at the mouth of Little Wabash, and at Skidmore's, although wholly formed of sand and gravel, have been situated on their present positions since the navigation of the river has been known. The shape of the banks govern the deposites which form the bars; in other places and parts of the river, the floods wash out and keep clear channels of greater depth.

These principal constituents of the character of the Wabash are believed to be well defined, easily ascertained, and such as present themselves to an ordinary observer.

It remains to add that this portion of the Wabash is navigable for boats drawing five to six feet, in ordinary seasons, for six months in the year, (from December to the first day of June;) and in that period it is frequently navigated by the largest boats which are used on the Ohio. And in relation to the prominent features of the country through which this portion of the Wabash extends—that its immediate valley is from three to seven miles wide, of low rich land of the lightest kind of alluvial soil, mostly overflowed in the annual spring floods, and occasionally interspersed with ponds, marshes, bayous, and ancient river beds. Through this valley the river pursues a serpentine course, forming a series of circuitous bends, which alternately approach the high plateau formed by the general level of the country on each side of the valley. Across these bends, cut-offs are formed in some places of many miles in extent, through which, as at Fox river, New Harmony, the Little Chain, and Black's cut off, the river continually flows, discharging no inconsiderable portion of its volume, and diminishing the depth of its waters on its own bed. The plateau of high land is washed at its base, on the Illinois side, at Mount Carmel, at Coffee island, at M'Creary's bluffs, and at the Little Chain. On the east side, the high lands only reach the Wabash at New Harmony and the Grand Chain. The banks of the Wabash to the Little Chain are ordinarily twenty-one feet in height above low water. The spring floods usually reach near their tops, and, at intervals of a few years, they rise six or seven feet over them; so that the greatest difference between high and low water is about twenty-seven feet. Below the Little Chain, the floods of the Ohio influence the current, banks, and bars of the Wabash; the banks are higher, and in times of the greatest rises of water more deeply overflowed. The sand-bars are more frequent and are less in conformity with the principles which appear to govern their deposition in the upper portion of the river; although there is not such a departure from them as would warrant a difference in the plans of improvement which might be adopted to overcome the impediments they oppose to the navigation of the river. The line of high water mark below the Little Chain increases from 27 to 50 feet. The cut-offs appear to be easily susceptible of enlargement, as at Black's, where, by burning and clearing away the drift at the head, and clearing the timber from the banks a few years since, by Messrs Gardner and Mundy, nearly the whole volume of the river passes through it, and the old channel is becoming dry and rapidly filling up with sand. No evidences of cut-offs being recently formed have been ascertained.

	Distance—miles.	Descent—feet.
The descent of the Wabash from the foot of the Grand rapids to the foot of White river rapids	1.75	1.47
To foot of Coffee island rapids	5.75	1.48
foot of Coffee island rapids	1.00	3.09
mouth of Black river by the Big bayou, 18½ by the Wabash	31	14-33
head of cut off at New-Harmony	3.33	0.17
foot of do by cut-off two miles by river	11.00	6.00
Warrick's ripple	2.50	0.22
foot of do.	1.00	0.84
head of Grand Chain	7.00	0.69
foot of the Grand Chain	0.50	3.86
head of the Little Chain	5.00	1.14
head of Black's cut-off	1.33	3.39
foot of do.	1.50	2.41
head of Wright's bar	3.00	2.57
foot of do.	1.25	1.29
head of Skidmores' bar	10.33	7.71
foot of do.	1.00	1·09
mouth of the Wabash	2.50	6.19
	90.74	57.94

The peculiar elements in the character of the lower valley of the Wabash, in its light alluvial soil, great extent of country overflowed, large amount of deposite carried along its current in floods, and liability to change its bed, especially if the current to any considerable extent should be impeded, preclude, it is believed, the plan of slacking the current of the river by a continuous series of dams, locks and pools; the liability of the latter to become so filled with sand as to force the waters into a new channel, and leave the works on dry land, is too great to warrant their construction. An examination of the river will hardly fail to convince the most sceptical that there are not many places in the Wabash from White river to the Ohio, in which the sand is deposited so as to form shoals in the river; these occur only under projecting points, and on the lower terminations of long straight reaches, and that where the whole volume of the river is reduced to 6 or 700 feet in width. On a sand or gravel bar, there is always a sufficient depth of water, and further, that although the channels over these sandy bars or shoals are changing always from side to side of the river, they seldom change in the direction of the stream. Sand bars were known at the principal points where they are now situated from the earliest knowledge of the country. Such being the fact in relation to the valley of the Wabash, to obtain a sufficient depth of water on the sandy shoals of the river, the plan of narrowing the channel seems to be pointed out as an efficient remedy. The same mode is proposed for the rock-bars at the mouth of White river, Coffee island, and at Warrick's ripple, only narrowing the bed of the river in a ratio to its fall, so that with the removal of detached rocks, projecting points, and a slight excavation of others which lie in place, three feet water may be obtained.

At the Grand Chain, surveys for a canal across the narrow point of land were made to form a channel for the river which would avoid the rocky bar of the current. Surveys were made for wing dams also, but on the mature comparison of costs and results, excavating a channel for a short distance beside the pier erected by Messrs. Gardner and Mundy, was supposed to be cheapest and best adapted for that object in view.

The water fell 4 feet in the length of 500, at the extreme low stage of the river, when the examinations were made. The rock over which this descent occurs, extends about 500 feet up and down the stream, and at each extremity breaks abruptly into deep water. Over this ledge of rock the current runs with great violence, and has a channel partially excavated beside the pier, varying in depth from two to four feet, except on a single point of rock towards the upper part of the excavation, which has not more than seventeen inches on its surface.

The pier referred to was built by Messrs. Gardner and Mundy, Commissioners of Indiana and Illinois, is a strongly framed series of wooden cribs of square timbers filled with stone, 900 feet long, 10 feet wide, and supposed 9 feet high. A channel in the rock was partially excavated, but, owing to a rise in the waters, the excavation on the up stream side of the rock was not completed.

The plan proposed is to excavate a channel 3½ feet deep into the upper part of the rock, and 75 feet wide, to diminish the fall and lessen the velocity of the current. No injurious effects are apprehended of lessening the depth of water at Warrick's ripple, the first shoal seven miles above. The river is deep between those places, and the quantity of water flowing in the Wabash is too great to be influenced that distance by an excavation of much greater dimensions.

The levees or wing-dams will be formed of timber bolted to the rocks, and filled with stone in all places where rock foundations can be found, similar to those erected by Messrs. Gardner and Mundy. On such positions as have sand and gravel foundations, small trees and brush in the first place will be laid, closely packed, two feet thick, and extending two feet on each side beyond the embankment. On this a bank of gravel 6 feet wide at top, with slopes of one and three quarters feet to one of perpendicular rise, will be laid and carried up within two feet of the required height of the embankment; over the gravel, a course of rubble stone protection, covering every part of it, will be placed 2 feet thick to preserve the gravel from the effects of the current and floods. The levees or wing-dams will be built of sufficient length to have their direction parallel with the course of the current, so as to oppose the least resistance to its motion, and consequently present the least hazard for boats to lodge on and receive injury from them. They are planned to give a minimum depth of three feet, and to rise from 1 to 2 feet above the lowest stage of the water, for security against ice-floods, as well as to present the least impediments to boats in the ordinary navigable stages of the water.

In devising modes for the effectual navigation of the Wabash, some difficulty occurs in determining the depth of water which shall be provided for that purpose. For three months in the year, there is not commonly in the Ohio river, above and below its confluence with the Wabash, for boats over the bars, more than from 2 to 2½ feet water, and this

season less than two feet; and this depth serves for the navigation of the river for small steamboats, and for the descending flatboat trade.

Two feet water in the Wabash, at all times, can be obtained at a small amount of cost. The improvements for that purpose are estimated—

For pier and wing-dams at Coffee island, to give 3 feet water,	$14,596 12
Removing loose rocks at Warrick's ripple,	1,500 00
Improving Grand Chain for 3 feet water,	4,355 00
Removing rocks from Little Chain, do.	1,500 00
Removing snags from river, including snag-boats and machinery,	18,880 00
	40,831 12
Add 25 per cent. for risk, in uncertainty of river, for, superintendence, &c.	10,207 78
	$51,038 90

The sand bars, as before remarked, have channels over them sufficient for the passage of boats drawing 2 feet water; and if these channels were indicated by buoys, or staked off, as they will be when a denser population increases the trade of the river, no difficulty would occur in passing boats of that draught in any season of the year. This plan of improvement would have, however, no reference to the sand-bars or shoals, which would, it is believed, retain that depth, from the fact that 2 feet was the mininum of the channel in so many places over the highest bars—and years of equal drought with 1838 will rarely occur.

To provide for a depth of 3 feet water in the Wabash, from the Grand rapids to the Ohio, the following works would be necessary, which are estimated to cost:

For pier on the Rock ripple, at the White river bar,		
1,460	feet long, 10 feet wide, and 6 feet high,	$8,560 00
3,200	feet wing-dam and piers at Coffee island	14,596 12
4,213	feet wing-dam at head of Fox river,	25,341 96
224	feet dam across the New Harmony cut-off,	11,696 78
6,045.70	feet wing-dam at head of do.	28,024 99
,815.26	feet wing-dam at Wincler's bar	25,379 32
4,175	feet piers and wing-dams at Warrick's ripple	27,487 97
	Excavation of rock at Grand Chain	4,355 00
2,600	feet length wing-dam on sand-bar below	11,079 78
	Rock excavation at Little Chain	1,500 00
9,033.42	feet wing-dams, sand-bar at Wright's above Little Wabash	35,085 59
		193,107 51

	Amount brought forward, -	$193,107 51
4,922	feet wing-dam at Skidmore's bar -	17,368 34
	Removing snags, (including boats and machinery) - - - - -	18,880 00
	Short dams across the head of Fox river bayou, and bayou at head of Little Chain, supposed to cost each $3,500, - -	7,000 00
		$236,355 85
	Add 25 per cent. for risk, uncertainty of river, and superintendence, - -	59,088 96
		$295,444 81

On the other portions of the river, there was water sufficient for boats of 3 feet draught, but unless the river should be leveed in its whole length, and its banks compressed into narrower bounds, a navigation of more than 3 feet cannot be obtained. Confidence is felt that wing-dams or levees so constructed that they will oppose the current but slightly, will be permanent, or at least preserve their position and utility for a long period.

This opinion is strengthened by the facts, that where the current is rapid, piers of timbers bolted to the rocks will be used, and the embankments will be formed at places where the current will be gentle and where there is a tendency already for the deposition of the sands; logs lodged on the bars are seen nearly buried, the water neither washing on their lower sides, nor under them; nor have the wing-dams, piers, or rubble walls placed in the river by Messrs. Gardner and Mundy a few years since, been removed.

The question naturally suggests itself, that if the sand and earth be washed out of the channels by these wing-dams, new deposites will be formed immediately below them, equally as injurious as those which are proposed to be remedied. The formation of the bars appears to depend on the shape of the banks; and where these are so situated that they now influence the waters to scoop out, and keep clear, sufficient channels—their form, the light material of the bed of the river, with the ease with which it is moved, are relied on to continue the same effects until the relative position of the banks are essentially changed; which is not often brought about by sudden transitions, but ordinarily is the work of time.

The general outlines of rivers are slowly changed, and the causes which influence the deposition of the earth and sands moved by their currents, still more so. For where bars were forming on one side, and the perpendicular bank on the opposite shore was washing away, the inclined plane of the bed of the river in its transverse direction, which is necessarily maintained during that operation, would always preserve a sufficient depth of water under the washed shore, and must so continue until new bends were formed. It therefore follows that the same causes which influence a current to deepen particular places, though not entirely permanent, (as nothing depending on the banks and beds of rivers strictly can stand in that relation,) they are nevertheless subject only to gradual changes, too slow in their progress to afford a reasonable ground to abandon a plan of improvement for objections based alone on that consideration.

To confine the banks of streams within narrower beds than they form for themselves, is no new operation in the history of the transactions of man. Rivers which overflow their banks, as they become densely settled, are uniformly leveed to reclaim low grounds and prevent the expansion of floods. Experience proves that artificial levees, made in a very ordinary manner, confine the waters of rivers with as much certainty, and with no greater expense, than waters are confined within the banks of a canal. Artificial embankments are the improvements which ultimately obtain on all rivers having a dense population on rich overflowed lands. Such has been the condition of the Nile from time immemorial—the condition of the Po and Adige of Italy, for centuries past—the condition of nearly all the rivers in Europe, and of the Mississippi, and partially so of many others in the United States. The improvement for deepening the channel of the Hudson near Albany is of this character, and has been persevered in for years. Embankments for leveing rivers have been very permanent, and have resisted, with success, those varying changes which rivers in their natural state constantly undergo.

It is not overlooked that the experience of the country in many places is against the use of wing-dams for the improvement of rivers; and where they have been erected with reference only to deepening particular bars, so soon as these have been washed away, others have frequently been formed above and below them; and when constructed so as to much oppose the course of the current, the water has dammed on the upper side, and in falling over undermined the lower, occasioned breaches, partially destroying the works, leaving portions of them standing their full height to the hazard of boats in medium floods. These objections are entitled to great weight, and it must be admitted that, on the western waters, where much of the trade is carried on in flatboats coming from long distances, in which, from the nature of the business, pilots cannot be employed, nor the navigators intimately acquainted with the country or the river, the natural beds of the streams, in half floods, are better than any plan of improvement which can be devised; but as the great object of improvements is to provide for the dry seasons of the year, this objection must yield to that higher consideration. It is with due deference submitted, that, on the plan of improvement proposed, these objections lose much of their force from the great length of the works erected with direct reference to the shape of the banks and course of the currents, which secures them in a great degree from being undermined, and lessens as much as possible the liability of boats lodging on and being injured by them; and makes the proposed works more assimulated in character with the levees used on large rivers than to the wing-dams with which they are now compared.

It is not supposed that the works contemplated will partake of such permanency of character as to last ages without repair; like the banks of a canal, they will doubtless be subject to breaches, and require attention and labor for their preservation. The practice and experience of the world warrant the inference that a fair title for durability may be claimed for them; and situated as they will be on the alluvial bed of the river brought there by the waters in their natural current, the inference is equally clear that, when additional velocity is communicated to

it, by reducing its width, the light materials of the bars will readily be removed, and channels formed of as great depth as the navigation of the river will require.

The plan of increasing the depth of water on the sand-bars contemplates, also, dams across the cut-offs, so that the whole volume of the river may be confined to its natural bed. The cause of the bar near the head of the New Harmony cut-off is occasioned by the diversion of the waters of the Wabash into the large bayou called Fox river, and the water which is discharged through the New Harmony cut-off. It is intended to dam the Fox river at its head—the New Harmony cut-off on the rock bottom near the mill, and thus restore the current to its ancient channel.

The cut offs straighten the direction of the river, but, on that account, do not render any advantage to the navigation in low stages. The part of the river the most crooked is between Coffee island and New Harmony, and there the river has the greatest depth.

The descent of the river is about eight inches per mile, taken in its whole extent; and 90 miles in length. The cut-offs and bayous through which the water flows in floods is not one-half of that distance. If the river was confined to these, its velocity would be so much increased that the channel would have to be very narrow to afford water for the navigation of boats. It is not sound policy to use the bayous and cut-offs for that purpose; they cannot give any advantages in dry seasons, and are objectionable on account of the river being the boundary, for about 200 miles of its course, between Illinois and Indiana. The borders of the river are filling with a population with great rapidity, and towns, trade, and capital increasing in size, extent, and value. Slight additional aid given in clearing drift and timber from heads of bayous and deep bends, would be sufficient, in more than one place, to alter the river for miles in extent in both States, and leave towns, where there has been an accumulation of capital, destitute of the navigation which induced its location. Good faith and the comity due adjoining States point to the necessity of early arresting these changes in the bed of the Wabash, to preserve the equality of the benefits between respective places, and the good feeling of their citizens.

The plan of improving the rock bars alone and clearing out the snags would be of immense advantage to the country bordering the Wabash; and with the two feet water which it would afford in seasons when the stage of the river would be as low as in 1838, which would not often occur, flat-boats could descend at all times, and steamboats of light draught, except impeded by ice, could navigate the river at all periods of the year. It is free from the objections of want of permanency, and hazard of being rendered comparatively useless, by changes and new formations of the river. It would *connect equally navigable portions of the Wabash*, and can be constructed for an inconsiderable sum, compared with the benefits it would secure to the citizens of the two States.

The plan of making the improvement for three feet water to the foot of the Grand rapids recommends itself as affording a navigation at all times equal to the exigencies of the country; has the advantage of arresting the further progress of the bayous which may hereafter become subjects of irritability between the two States, and of rendering the naviga-

tion quite as good as the present state of the navigation of the Ohio; and, from the benefits which it would secure to their citizens, would form a subject worthy of the enterprize and co-operation of Illinois and Indiana.

The greatest depth of water which can be obtained, at any reasonable cost, by improving the channel of the Wabash, is three feet. This was not supposed sufficient to answer the requisitions of the instructions received, nor such as would comply with the statute of the State of Indiana authorizing the survey, and the intimation given in it for the examination of the canal route located by P. Von Smith, Esq., at the instance of the citizens of Posey county. So soon as the examinations of the river were completed, the survey of the canal route was commenced.

Until the report of Mr. Von Smith came to hand, which was at a late period in the river surveys, it was supposed that the Wabash at New Harmony, with the aid of a deep cut, would command the summit between that place and Mount Vernon, on the Ohio river. This was not the case, the Wabash lying too low for that purpose.

The point on the Wabash, indicated by the levels for a feeder to supply this canal, is at Coffee island, six miles below the Grand rapids. Big creek was guaged and found to discharge less than 300 cubic feet per minute. Indian creek and Rush creek, if not entirely dry, could only be said to run, and were useless as feeders. No situation well calculated for a reservoir on Big creek was perceived; which, with the doubts of the propriety of relying on such mode to supply so large a canal, (19 miles long. with lockage both sides of the summit,) and the consideration that much of the benefits accruing from the work would be from the water-power it would create, determined the necessity of obtaining the supply from the Wabash.

This route of canal divides itself, naturally, into three divisions. The first or northern division embraces the deep excavation occasioned by sinking a feeder five feet below the surface of the Wabash in a low stage, and extends from the head of Coffee island to Black river, 18 miles.

The middle division, from Black river to Chainville, in common cuting, 12 miles.

The southern division, from Chainville to Big creek, Indian creek, the summit, and to Mount Vernon, 11 miles.

In one respect, Coffee island is an unfavorable point for a feeder or the junction of a canal with the river. The high land of the level country, for over 10 or 12 miles above the mouth of White river, does not approach its southwestern bank, or the bank of the Wabash, until it arrives near New Harmony, and forms a plain embracing the mouths of the White and Patoka rivers, more than 30 miles long and from five to seven broad, which is ordinarily overflowed from 7 to 10 feet deep. It is more than five miles wide at Coffee island, and the nearest direction to the high land is almost at right angles with the course of the canal.

The lower part of this plain is drained by the Big bayou, which leaves the Wabash about six miles below Coffee island, and running a southerly course ten and half miles, is discharged into the Wabash one and half miles above Black river.

The waters of this immense plain are too accumulated in quantity to

be taken into a canal or passed under it, and it is objectionable to have it flow for miles between the canal and the high plain at the base of which, after leaving the Wabash, the canal must be located.

A bayou discharging itself into the Wabash a short distance below the head of the canal, carries off the waters on the subsidence of the floods from the low grounds between the high lands bordering the valley and the bank of the river. A ditch 29 chains long will be necessary to turn its channel into the Wabash above the canal. Further explorations may make it necessary to extend ditches from this bayou to drain the waters intercepted on the low plain by the bank of the canal; but, if any such necessity exists, the expense of forming the drains, from the surveys which have been made, will be inconsiderable, and no provision is made for them.

The dimensions of the canal which are here estimated are, for the least width at surface of water, 52 feet, width at bottom, 34½ feet, with spaces at all places, once in half a mile, where the banks are not sufficiently apart, of 100 feet wide, for steamboats to pass each other; the banks not less than eight feet high; the slopes on both sides, as well as the canal, of one and three-fourths feet base to one foot perpendicular rise; the tow-path ten feet wide at top, the berm bank six feet; the locks 38 feet wide and 175 feet long in the chambers; water-way of aqueduct, 42 feet wide; and the bridges built with draws, to turn on a pivot with a rack and pinion, to open for the passage of boats.

The first eight miles from the Wabash will be very expensive, and there would be not more than $44,000 additional cost in changing the plan, by raising the level of the canal six feet by a dam across the Wabash, at the lower end of Coffee island, nine feet high—the dam provided with a lock for the passage of steamboats in the Wabash; and the lock of six feet lift added to the canal.

More perfect surveys and examinations may find this the least expensive mode; and from the fact of its forming the best improvement for the Coffee island rapids and the rapids at White river, it presents a strong reason for the construction of the canal as well as the change of plan.

In making the comparison, the dam and steamboat lock on the river, and the six feet lock on the canal, were estimated at $305,000.

It is not contemplated that the proposed canal will command the steamboat trade except at times of low water. Its want of width and the necessity of using horses to tow the vessels will give the preference to the river when it can be used. The nature of the trade will hardly permit steamboat owners to have relays of horses on the line of the canal; these must be hired, which will increase, in some measure, the hazards of delay.

A steamboat canal on the margin of the Wabash should be six feet deep and 100 feet wide, with the banks paved with stone, so that boats might pass each other at all places, and be propelled by steam. Such a canal, with a dam and lock at Coffee island sufficiently high to raise the water four feet on the rapids at the mouth of White river, would be an effectual improvement of the Wabash from the Ohio to some 15 or 20 miles above the Grand rapids. Its cost, however, places such a work out of the question. It could not be constructed for less than three and a half millions of dollars.

The plan of the work proposed, although not perfect as regards the navigation of steamboats, is well calculated for the trade of the country. Its size will render the freights cheaper than they could otherwise be on a canal of less dimensions, and it also combines the advantage of affording a tolerable mode for the business of steamboats at all seasons of the year when free from ice.

The distance between Mount Vernon and the mouth of the Ohio, by the map, is 19 miles, and the distance in the length of the voyage from that point to the Grand Rapids will be shortened more than one-half by the canal. How far this circumstance, combined with its safety, will compensate for the difference between using it and the river, is difficult to determine, although it is clear it must have some influence on the business and the tolls which will be received.

After leaving the Wabash the canal will be carried near its bank for six and a half miles in a southerly direction, where it meets the Big bayou, which for ten and a half miles in the same course, by being slightly excavated and straightened, will save half the cost of a canal in the common level of the plain. From the bayou it passes near the Wabash, one and a half miles to Black river, which in floods swells to a large stream. It lies too high to be crossed with a dam, and not sufficiently so for a wooden trunk aqueduct to be safe from floods. The canal is carried over this stream on a culvert of ten semi-circular arches of twenty feet span to give it sufficient water way. The cost of this structure is estimated at $5[illegible],000. It is in the back-water, and no apprehensions from drift are entertained.

From Black river to New Harmony, a distance of three and a fourth miles, is a very uniform plain; passing it the canal will be carried along the foot of the bluff bank on the left side of the cut-offs, for nearly one mile; thence generally near the river to Chainville, the end of the middle division.

From Chainville the canal begins to diverge from the valley of the Wabash by turning in a more easterly direction up the plain of Big creek. After some progress had been made in the surveys, the surface of this creek was found to be too low to admit of being crossed in a dam of 28½ feet in height without flooding more country than was considered prudent or safe for the work.

The level of the canal is so little elevated above the range of the floods that a stone aqueduct is here necessary. The aqueduct has three eliptic arches of 50 feet span and 17 feet high. The highest floods will rise over the top of the arch against the aqueduct; but from the extent of the water-way, the small descent of the stream, and its situation in the back-water of the Wabash, it is supposed safe from drifts. The cost of this structure will be $86,000.

From the aqueduct to the foot of the ridge dividing the waters between the Wabash and the Ohio, the canal is taken two miles on the south-western banks of Big and Indian creeks. In ascending the ridge the ascent is 12 feet in one mile; in the second mile, it raises from 12 to 21 feet; the third mile, from 21 to 33; the next half mile rises to 38 feet and descends to 33; the next mile of the summit descends to fifteen feet, which is the height of the plain one mile from the locks on the bank of the Ohio river. The lockage is overcome by four locks, the three first next the Ohio of 14 feet lift, and the fourth of 15 feet lift.

The cost of the northern division,	13 miles	28 chains, is	$932,250 16
of the middle division,	12 miles	27 chains	221,806 37
of the southern division,	11 miles	15 chains	1,065,051 22
	41	70	$2,219,107 75

The route and plan are not favorable for cheap construction. In taking a feeder from a large stream with small descent, much cost is unavoidably encountered. To this, in the present instance, are to be added the large *size* of the locks, the necessity for draw-bridges, the cost of a stone aqueduct over Big creek, the expensive culverts over Black river, and a guard-lock 33 feet in height, estimated to cost $123,000, at the head of the canal, which, with the deep excavation at the Wabash feeder and the deep cut near the Ohio, swells the costs much beyond the price per mile for which canals have been generally made.

It is proper to remark that the estimates for the northern and middle divisions were made from the notes and levels taken in the river surveys, and on a revision would be susceptible of improvement; which, to some extent, would reduce the cost of the work and shorten the route. This remark is particularly applicable to the middle division. The southern division was carefully surveyed to determine the point of a feeder from the Wabash; and as the line down the river was carried along the plain on which the upper part of the line must be located, (that fact being determined by the course of the bayou,) a re-survey for all practicable purposes was unnecessary; and to compensate for the difference of costs, which may be saved by a strict examination, no allowance has been charged for contingencies and superintendence, which will amount to a sum which will at least equal all the benefits derived from the final location.

The greatest portion of the expenses of the canal is at its terminations. The first eight miles, next the Wabash, are estimated to cost $731,933 48, and the first four miles next the Ohio, $795,037 28.

The locks and aqueducts are estimated to be built of hewn stone, laid in hydraulic cement.

The plan and estimates provide for a moderate sized basin for steamboats at Mount Vernon, and a basin for mills and water privileges.

In the receipt of tolls, and the rents derived from the sales of the water-power, the canal would have an advantage over the improvements contemplated in the channel of the Wabash. The country through which the canal route passes, in the greatest part of its length, is well cultivated, rich in agricultural productions, abounds in timber, and is supplied with iron ore, limestone, and marble. It is nearly destitute of water-power; consequently, its introduction would be of immense value.

There are now in operation in Posey county 12 steam engines, which are said to cost their owners the average sum of $2,000 each, or the gross sum of $24,000 annually, for keeping them in fuel. The construction of the canal would create water-power to an extent which would only be limited by the demand. It could be used from Black river to Big creek, as well as at the site at Mount Vernon, where it would have a fall, in ordinary stages of the Ohio, of more than forty feet.

The extent of the manufactures, now in Posey county, warrants the belief that its citizens would, soon after the water privileges were offered for sale, become purchasers to the amount they now expend for fuel on their mills; and the facilities for procuring raw materials, with the command of markets on or near the Ohio, would so induce the establishments of emigrants for manufacturing flour, lumber, and iron, that five years would not elapse before the rents for water privileges would be worth $30,000 annually; which, with the tolls received, although they will not be so large in amount as if the canal was more remote from the Wabash and the canal now being constructed between Evansville and Terre Haute, yet would go far towards reimbursing, or perhaps, in time, completely paying its cost of construction.

The extreme sickness of the season greatly retarded the surveys, increased its expense, prevented, in some measure, that close examination which, under other circumstances, would have been given; and, from the ill health consequent on its exposure, have unavoidably delayed this communication until the present moment.

The disbursements made previous to the 1st of December, were—

On contracts with Messrs. Wilson, & Co. - - -	$6,409 00
For surveys and superintendence - - - -	4,192 31
	$10,601 31

Of this sum—

The Commissioners on the part of Indiana paid:			
For construction account - -	$4,093 00		
surveys and superintendence -	1,056 83		
		$5,149 83	
The Commissioners on the part of Illinois paid:			
For construction - - -	2,316 00		
surveys and superintendence -	3,135 48		
		5,451 48	
			10,601 31

As per account with vouchers rendered.

Appended are abstract of contract prices, specifications, and notice exhibited at the letting, and blank form of contracts.

All of which is respectfully submitted.

D. BURR,
Principal Engineer, Wabash river.

Abstract of contract prices for the lock and dam at the Grand Rapids of the Wabash river.

Lock Section No. 1. William Mudge, contractor. Items.	prices.	Dam Section No. 2. Baker, Riley & Co., contractors.	prices.
For regular coursed masonry in lock and abutment walls, per cubic yard, if the materials be procured from the quarry at Portersville	$14 00	-	$14 00
If from the quarry near Gater's	16 00	-	14 00
If from the quarry near Petersburg	11 50	-	13 00
For earth excavation, in lock-pit above water, per cubic yard	18		
For earth excavation in abutment-pit above water, per cubic yard		-	13
For earth excavation in lock-pit below water, per cubic yard	50		
For earth excavation in abutment-pit below water, per cubic yard		-	50
For rock excavation in lock-pit below water, per cubic yard	1 00		
For rock excavation below water and below lock pit, per cubic yard	1 50		
For stone filling in crib protection, above and below lock, per cubic yard	1 50		
For stone filling in dam, per cubic yard		-	1 10
For stone pavement or rip-rap protection below lock cribs, per cubic yard	1 50		
For stone rip-rap protection below abutments, per cubic yard		-	1 10
For square timber in crib protection wall, per lineal foot	14		
For square timber in lock foundation, per cubic foot	14		
For timber in cribs of dam, per cubic foot		-	14
For timber in abutment foundation, per cubic foot		-	14
For timber in culvert foundations, per cubic foot	13	-	14
For square timber in culverts, per cubic ft.	13	-	15
For round ties, per lineal foot	10	-	10
For puddle, per cubic yard	40	-	35
For sheet-piling, per square foot	10	-	8
For 6 inch covering timber for dam, per superficial foot		-	12½

ABSTRACT—Continued.

Items.	Lock Section No. 1. William Mudge, contractor. prices.	Dam Section No. 2. Baker, Riley & Co., contractors. prices.
For wrought-iron in straps, clamps, screws, rods, chains, gate-irons, and all other wrought-iron about the dam, lock, or culverts, except the spikes, per pound	$0 20	- 18
For cast-iron, including capstan wheels, shafts, and all other cast-iron, per lb.	15	
For square timber in gates and mitre sills, per cubic foot	12	
For wood-work in lock-gates and mitre-sills, including framing, planking, fitting paddle gates, and all the wood-work represented in the drawings or described in the specifications, and hanging the gates complete, for the gross sum of	600 00	
For 3 inch plank on lock, culvert, or abutment foundations, per square foot	10	- 5½
For 2 inch plank in lock, culvert, or abutment foundations, or for facing walls of cribs, per square foot	8	- 4
For wrought-iron spikes in dam, crib protection, lock-gates, chamber of culvert, per lb.	20	- 18
For gravel above dam, per cubic yard		- 35
For gravel in culvert cribs	40	- 35
For earth excavation in culvert-pit	16	- 15
For earth excavation in side-cut canal, per cubic yard	16	- 15
For embankment for guard-bank	14	- 16
For clearing and grubbing under guard-bank, per lineal chain	6 00	- 5 00

Article of Agreement

Entered into this day of one thousand eight hundred by and between M. K. Alexander, Commissioner of the State of Illinois, and acting in its behalf, and Thomas H. Blake, Commissioner of the State of Indiana, and acting in behalf thereof, party of the first part; and
party of the second part

Witnesseth, that the said party of the second part, for and in consideration of the payments, and covenants hereinafter mentioned, to be made, the said party of the second part do hereby agree, covenant, and engage to furnish all the materials, and perform all the labor, necessary to build and construct section No. of the joint improvements of the States of Indiana and Illinois, of the Wabash river at the embracing the together with the abutments, guard-banks, canals, crib protection-walls, pavements, and all the fixtures represented in the drawings or described in the specifications exhibited at the letting of said section; which drawings and specifications are deemed and taken as part of this contract; and further agree to build and construct all the walls, embankments, crib-work or other fixtures, which may be directed by the engineer having charge of the work.

In consideration of the work so to be done and executed, it is agreed and understood, that there shall be paid by the Commissioners aforesaid to the said party of the second part, as follows:

For regular coursed masonry in lock-walls, per cubic yard,
If the materials be procured from the quarry at Portersville,
If from the quarry near Gaiter's,
If from the quarry near Petersburg,
For earth excavation in abutment pit above water, per cubic yard,
For earth excavation in lock-pit below water, per cubic yard,
For earth excavation in abutment pit below water, per cubic yard,
For rock excavation in lock-pit below water, per cubic yard,
For rock excavation below water, and below lock-pit, per cubic yard,
For stone filling in crib protection, above and below lock, per cubic yard,
For stone filling in dam, per cubic yard,
For stone pavement, or rip-rap protection, below lock-cribs, per cubic yard,
For stone rip-rap protection below abutment, per cubic yard,
For square timber in crib protection-walls, per lineal foot,
For square timber in lock foundation, per cubic foot,
For timber in cribs of dam, per cubic foot,
For timber in abutment foundation,
For timber in culvert foundation,
For square timber in culvert, per cubic foot,
For round tiers, per lineal foot,
For paddle, per cubic foot,
For sheet piling, per square foot,
For 6 inch covering timbers for dam, per superficial foot,
For wrought iron in straps, clamps, screws, rods, chains, gate irons, and all other wrought iron about the dam, lock, or culverts, except the spikes, per lb.

For cast iron, including capstan wheels, shafts, and all other cast iron, per lb.

For square timber in gate and mitre-sills, per square cubic foot,

For wood work of lock gates and mitre-sills, including framing, planking, fitting paddle-gates, and all the wood work represented in the drawing, or described in the specifications, and hanging the gates complete, for the gross sum of,

For 3 inch plank in lock, culvert, or abutment foundations, per square foot,

For 2 inch plank in lock, culvert, or abutment foundations, or for facing walls of cribs, per square foot,

For wrought iron spikes in dam, crib-protection, lock-gates, chamber of culvert, per lb.

For gravel above dam, per cubic yard,

For gravel in culvert cribs,

For earth excavation in culvert pit, per cubic yard,

For earth excavation in side-cut canals, per cubic yard,

For embankment for guard-bank, per cubic yard,

For clearing and grubbing under guard-bank, per lineal chain,

It is understood that the prices offered for the above items are intended to include materials and labor of every description required to fit and put them in the work. The plank, timber, and all other materials paid for by measurement or weight, shall be estimated, or the quantities shall be determined, by the dimensions of the timbers, or other item, as it lies in the work when finished.

No allowance will be made for bailing water, and no extra allowance will be made in any case for the performance of this contract, beyond the sum stipulated herein, except for additional or extra work.

It is further agreed that any items of work that may necessarily occur in or about the lock and dam, not already specified in this contract, or represented in the plan, or described in the specifications, and which may be directed to be done by the engineer, shall be estimated by him and paid for according to its value.

And it is further agreed that this contract or any part thereof shall not be transferred, or sub-contracted in any manner, or under any pretence whatsoever, except for the procuring of materials.

And the party of the second part further agree that, whenever required by the Commissioners aforesaid, or the engineer having charge of the works, will engage and employ a first rate mechanic to superintend the construction of the structures included in this contract, whose qualifications shall be approved of by the Commissioners or engineer aforesaid; and the party of the second part further covenant and agree to dismiss from service and employment, such mechanic or any disorderly quarrelsome person, who shall wantonly commit any trespass, either upon the person or property of any individual whatever, or be guilty of any offensive conduct of any kind: and at any time, the party of the second part covenant and agree to discharge from service, all and every person or persons employed by or under whenever thereto directed by the engineer having charge of the works.

And it is further understood and agreed that the party of the second part shall commence said section No. including the and other works, on or before the 1838; and it is further agreed that the said party of the second part shall and will, in all and every thing and matter, conform to the orders and directions of the chief engineer, or assistant engineer, or other person having charge of the work, and do and execute all the work in the said contract mentioned in the mode and manner directed by them; and whenever the said engineer may and shall think proper to change, alter, enlarge, diminish, or alter the amount of work or location of the work on this contract, he shall have full power and authority to do so; and the said party of the second part do bind faithfully to observe and obey his instructions and directions touching such change, alteration, enlargement or lessening; and when the same is done, the said engineer shall have full power to make such addition to or deduction from the amount agreed to be paid for the work as, in his opinion, may be just and equitable.

It is further understood and agreed by the parties that, in case the said section No. embracing the shall not be commenced within the time above stated; or if at any subsequent period, the party of the second part should, in the opinion of the engineer having charge of the work, fail, refuse, or neglect to prosecute this contract with a force proportionate to the quantity of the work to be done, and the period in which it is to be completed, or shall sub-contract or relet said section No. or any part thereof; or shall not give personal superintendence to the work, or shall refuse at any time to conform to the directions of the principal engineer, or assistant engineer, or superintendent of the works, or shall violate, in any way or manner, any of the stipulations, provisions, or conditions of this contract, the Commissioners shall have power to declare this contract forfeited, and null and void; and, on their declaration, the same shall cease and determine forever, and as if it had never been made, and they may proceed to relet the same; and in case of such declaration or forfeiture, the retained per centage, hereinafter provided for, shall belong to the States of Indiana and Illinois, as a compensation for damages which, it is hereby agreed by the parties, they shall be entitled to in consequence of a failure of the party of the second part to perform the stipulations of this contract.

It is understood, and mutually agreed, that, if in the opinion of the principal engineer at any time the party of the second part shall fail to give reasonable assurance of finishing the contract in the time specified for its completion, the said engineer, with the consent of the Commissioners aforesaid, shall have full power to authorize an agent to employ hands, purchase materials, and complete the work; the expense of which shall be charged to the party of the second part, and be deducted out of the amount which would be due under the terms of this contract; and in the final settlement of accounts, the receipts of such disbursements made by such agent shall be taken and considered as good off-sets to the amount due to the party of the second part.

It is mutually underst od and agreed that the amount of work done, and the materials delivered at the site of the works, at contract prices,

and the value for the stone quarried and delivered near the quarries, shall be estimated by the principal engineer as nearly once in each month as can be conveniently done; and that, for eighty-five per cent. of such estimate, the party of the first part will give, within ten days after, their checks to the party of the second part on the Branch Banks, either at Mount Carmel or at Vincennes, payable at sight; and that when this section No. shall be completed and finished according to the contract, plans, specifications and directions of the engineer, or within thirty days thereafter, the amount and value of all the works and materials shall be valued by the engineer in charge of the works; and on the presentation of his certificate, or within ten days thereafter, the balance due the party of the second part, including the amounts of the fifteen per centages retained from time to time, shall be paid to the party of the second part.

And it is further understood and agreed that the decision of the principal engineer shall be final and conclusive, as to the manner of the work and the quality of the materials to be used in the structures embraced in this section, and conclusive in all disputes, matters and things relating to this contract; and each and every of the said parties do hereby waive any right of action, suit or suits, or other remedy in law, or otherwise, by virtue of said covenants, so that the decision of the said principal engineer shall in the nature of an award be final and conclusive on the rights of the parties.

The party of the second part covenant and agree to finish, complete, and deliver up this contract on or before the day of

In witness whereof, the parties have hereunto set their hands and seals, this day and year first above written.

Specifications of the works at the Grand Rapids of the Wabash river.

The chamber of the lock will be 175 feet long, from quoin to quoin, and 38 feet wide. The whole length of the lock, including the chamber, will be 236 feet; the river wall will have a base of 16 feet, and the wall on the shore side of the lock a base of 14 feet in width.

The lock-pit, if the rock of the river bed should not prove sufficiently solid to form parts of the walls, will be excavated 244 feet long in the bottom and 76 feet wide, except along the middle of the chamber, on a distance of about 100 feet, where it may be reduced to 72 feet wide. The bottom of the pit will be excavated to such depth, and the slopes of the sides and the ends of the pits shall have such inclination as the engineer may direct. The parts of the bottom of the pit on which masonry is to be built will be required to be dressed down to an even, solid, horizontal surface; and where the rock proves to be sufficiently compact and firm to be used for a portion of the walls, it will be required to be cut off in benches, smooth and without being shattered, to correspond in height and width with the courses of masonry. And in the same manner where the rock is fitted to receive timbers, a solid, even bed must be prepared for the same to rest on or lie against, where the

sides or ends come in contact. In case rock should occur in the abutment-pit, the same regulations will be observed.

The rock in the bed of the river below the lock-pit, between the protection walls, will be excavated to such width and depth as may be found necessary for the admission of boats and vessels into the lock; the quantity and dimensions of which excavations will be determined by the engineer.

The foundation timbers which form the bottom of the lock are to be hewn square, laid side by side, 14 inches deep and not less than 12 inches wide, and long enough to extend 2½ feet under each wall; a hole, 2 inches in diameter and 20 deep, is to be drilled near the centre line of the lock under the middle of each timber, and a seasoned locust or white-oak pin, 2 inches in diameter, pierced through the middle in the direction of its length, with a half-inch hole; it is to be driven firmly into the hole in the rock. Each timber as it shall be laid will be secured by a 7-8 inch bolt, driven through it into the hole in the rock below. The bolts to be ragged at the ends. The timbers are to be covered with 3 inch white-oak plank, laid lengthwise of the lock, and secured with 1¼ inch seasoned white-oak or locust pins, 10 inches long, and put in in the proportion of two to every third timber in each plank. Both the timbers and the planks are to be fitted closely to the rock, and the joints between the ends of the planks and the joints between the timbers and the rock are to be made water-tight.

The walls of the lock will have the form and dimensions represented in the plan; they will be vertical on the faces towards the chamber, from the head of the lock to the upper hollow quoin, and from the upper end of the lower recess to the lower end of the wall. The face of the wall between the upper hollow quoin and the upper of the lower recess will have a curve at the top of 2 inches—the line of the wall at the bottom will be straight; the outer face of the wall on the river side will have an inclination or batter of 1½ inches to each foot in length; the back of the lock on the land side of the lock will have an inclination, to be made in offsets of 2½ inches to each foot in height.

The walls are to be regular coursed masonry throughout; the smallest courses are not to be less than 14 inches thick or deep, and they may vary from 14 to 30 inches; the stones which form the inner faces of the walls are to be cut smooth on the face, and the beds and joints are to be dressed even, and so as to form right angles with the face, except the beds of the lower course on each side, which are to be bevelled in such manner as to give the curved part of the wall the desired inclination; the stretchers are to have beds and joints of not less than 2½ feet in width, measured from the face back into the interior of the wall.

The headers, in all the courses from 14 to 24 inches thick or deep, are to be two feet wide from joint to joint measured horizontally on the face; and in courses of more than 2 feet in thickness, the headers on the face of the wall to be cut square, with the same bed as thickness, the beds of the headers to be dressed evenly throughout, and the joints are to be dressed as far back as the joints of the stretchers will extend; each header shall extend back into the wall of the full size of at least 4½ feet in the smallest courses, and 5 feet in the courses which are more than 16 inches deep on the face; the headers in each course are to be placed at intervals of not more than 10 feet, measuring from centre to centre; the

space between them shall be filled with either one or two stretchers. The headers and stretchers in the outer face of the river wall are to be of the same dimensions as those on the inner face, but the faces of those on the outer side are to be bevelled so as to give the wall the inclination or batter above mentioned. A draught is to be cut around the face of each stone, and the middle part may be dressed off with the pick and bush-hammer; the headers in the back of the wall, on the land side of the lock, are to be of the same dimensions as those in the face; and in all places in the walls where the headers will not lap or pass each other in the centre, a third course of headers are to be laid, of a suitable length in the interior of the wall, in such manner that they will reach or extend one foot or more beyond the headers from the sides of the wall. The backing is to be made up of stones of the same thickness or depth as the face stones, both beds are to be dressed so as to give even and parallel surfaces. The sides of the backing stones are to be dressed with the hammer, and generally to contain not less than 10 cubic feet, and are to be so arranged as to break joints, in order to bind the wall strongly together, and give the whole width of the structure a firm bond. The mortar joints in the face of the walls are not to exceed 3 sixteenths of an inch in thickness.

When one course shall be laid throughout its whole extent, it must be well grouted, and the whole of the upper bed dressed off to an even horizontal surface, before the commencement of another course. The thickest courses are to be laid in the bottom of the wall, and the thinner courses towards the top, unless otherwise directed by the engineer.

In each superior course, the headers are to be placed midway between the headers in the course below, and the backing stones in it are to be so arranged as to break joints with the backing stones and headers in the course below.

The breast of the lock will be raised to such height as will hereafter be determined by the engineer, and will be covered with oak timbers of the same dimensions, and with 3 inch plank in the same manner, and the timbers to be extended into the walls the same distance as the timbers and plank are laid in the parts of the chamber of the lock; a double course of sheet piling is to be put in across the upper end of the lock and the upper ends of the pile plank and are to be so fitted as to make a water-tight joint with the plank which covers the breast. Under the mitre sills the wall is to be formed of large stone, with beds and joints, cut and fitted in such manner as the engineer may direct. The faced stones under the mitre sills are to have vertical joints at right angles to the curve of the breast; holes are to be drilled in the wall to receive iron rods to secure the mitre sills.

The mitre sills will be made of the form and dimensions represented in the plans; they will be put in after the lock walls are built, and secured to the foundation timbers with eighteen 1 inch square bolts, 30 inches long, put in at such points as the engineer may direct. The timber will be of the best white-oak, hewn smooth and planed, and the joints fitted in the best manner.

The upper mitre sills will have, in addition to the common bolts, bolts of 1¼ inch iron, to pass through the timbers into the wall below; there will be four of these long bolts in each upper mitre sill.

The coping, hollow quoins, and breast stones are to be of such com-

pact strong stone as shall be approved by the engineer; the coping stones are to be of the dimensions represented in the plans; they are to be in all cases not less than 18 inches thick. The quoin and breast stones are to be of such form as the engineer may direct; they are to contain each not less than 25 cubic feet.

The mortar used in the walls is to be made of hydraulic lime and clean sand mixed in such proportions and made in such manner as the engineer may direct. The stones are all to be laid in thick mortar, extending 18 inches back from the front, the wall being first wet before it receives the mortar; the stone to be laid will then be wet, brought to its position, and settled with a heavy maul, until its surface bears firmly on the stone beneath, crushing out all surplus mortar, and leaving only so much as will fill the cavities; the face of the stone will be brought to its vertical position by sinking and not raising the back part; the ends of the stone will be placed closely in contact without mortar, and the joint will afterwards be filled by crowding the mortar forward from the back of the stone, by means of a thin iron blade made for that purpose; thin mortar or grout is to be used for filling up the joints and cavities after each course shall be laid. All the grout used shall first be made into thick mortar well mixed, and afterwards reduced to the proper consistency by the addition of water.

The capstan wells are to be placed in the walls as represented in the plan; from the bottom of the coping to the bottom of the well, they are to be 18 inches square; the part through the coping is to be enlarged to receive the cast iron frame of the wheel and pinion; a plate of cast iron, with a socket to receive the end of the capstan shaft, is to be built in the bottom of each well; when the lock wall is laid, the plate is to be laid upon a stone of large size, and secured to it by bolts. Holes, 1½ inch in diameter and 6 inches deep, are to be drilled into the stone, and filled up with a seasoned white-oak or locust plug; the spikes are to be driven into these plugs; the opening from the bottom of the well to the face of the wall is to be 18 inches wide and 18 inches high at the end next to the well; the bottom of this opening will have a descent from the well outward, of 2 inches in each foot; the lap will be horizontal; a bar of iron, 4 inches wide and 1 inch thick, will be laid in the wall on a level with the bottom of the capstan drum, and 1 foot back from the face of the lock wall; this bar of iron will extend 1 foot at each end into the wall, and will be let into the lower stone, so that the upper surface of the bar may be level with the surface of the stone.

The shaft, drum, wheel, and pinion, to be placed in each capstan well, are to be of cast-iron; the gudgeons and journals are all to be turned and well fitted to the boxes.

There will be 3 chains to each gate, 1 to open it, 1 to shut it, and 1 about 6 feet long, to secure it to its place when opened during a freshet. The chains will be made of ¾ inch round iron, with short links partially twisted; the chains for drawing open the gates will be fastened to the mitre post by a staple bolt inserted near the surface of the water; the chains for closing the gates will be attached near the bottom of the lock, at the lower gates, and near the top of the mitre sills, at the upper gates; these chains will be attached to the mitre post by a ¾ inch iron

rod passing through the eye bolts, and fastened at the top by a key; the chains will be fastened to the drums by a staple bolt.

The frames of the lock gates are to be made of the best quality of white-oak timber, seasoned at least one year. The gate bars are to be framed into the mitre and quoin posts by double tenons on each end. The joints are to be strengthened by plates of iron (T's and L's) let into each face of the timber, and secured by ¾ inch screw bolts; a band of iron is to be put upon the top and bottom of each quoin and mitre post; the bands are to be driven on to the ends of the posts, and secured by driving wedges into the ends of the timber.

There will be 5 cast iron paddle gates, each 30 inches square, in each lock gate; they will be placed between the lower bar in the manner represented in the plan, with the rods and irons in which they are worked and secured. A cast iron box, with a socket, is let into the quoin post, and fastened with wedges; a pedestal, with a pivot to fit into this socket, is to be placed upon the lower course of plank, and secured by bolts; this pivot and socket will form the hinge for the bottom of the gate; the upper end of the quoin post will be supported by an iron collar, secured by anchor bolts, as represented in the plans.

The roller-way will be formed of a piece of white-oak timber, 14 inches wide and 8 inches thick, cut so as to form the proper curve, to be spiked to the lower course of plank in the bottom of the lock for a roller-way for each gate; the upper corners of this timber to be bevelled off, and a bar of iron, 4 inches wide and 1 inch thick, is to be fastened on the centre of the timber; the spikes with which the iron is fastened will be counter sunk, so that the surface of the way may be smooth; the roller and the pillow block, for securing it to the bottom gate bar, will be made of cast iron; the pillow block let into the bottom bar, and fastened by screw bolts; the axle of the roller will be made of wrought iron, and the gudgeons turned in the roller, and will be secured to the pillow block with staple bolts, as represented in the drawings.

Cramp irons for securing the coping of the lock will be formed by a line of iron bars, 2 inches wide and ½ inch thick, let into the stone, on a line 18 inches back from the face of the wall; holes 6 inches deep, 1¼ inches diameter, are to be drilled into the coping under the line of bars at intervals of 18 inches or less; when the joints render it necessary a seasoned white-oak or locust pin, with a small hole lengthwise through the centre, is to be driven into each hole; holes are made in the bars to correspond with the holes drilled into the coping, and an iron spike, ⅝ of an inch in diameter and 5 inches long, is to be driven through each hole in the bar into the locust pin in the coping; a spike will be put in the end of each bar; the bars are to be regulated so as to make joints in the middle of each coping stone.

At the recesses for the gates, the line of bars are to pass each other, or lap 2½ feet; a line of cramp bars are to be put along the outer face of both walls in the same manner as they are put on along the inner faces.

A second course of bottom plank will be put on after the walls are built and the mitre sills and roller-ways put down; the planks for this course will be seasoned white-oak, 2 inches thick, jointed on the edges and ends; and, when laid, are to be so fitted to the walls, mitre sills, roller-

ways, &c., as to make water tight joints; the planks will be laid lengthwise of the lock, and they are to be secured with hammered iron spikes, half an inch square and 12 inches long, put, in the proportion of 2 spikes to every third timber, in each plank; the spikes are to be driven so as to pass into the centre of the 14 inch timbers.

The gates are to be planked with 3 inch yellow-pine plank, well seasoned, planed and jointed at the edges; they are to be carefully fitted into the rabbits of the bars and posts, and secured with hammered iron spikes, $\frac{3}{4}$ of an inch square and 7 inches long, put in the proportion of 2 to each timber or bar for each plank; the gates are to be painted with such paint as the engineer may direct; the iron work is all to be covered with the kind of black varnish commonly used for painting iron.

Walls of crib work, filled with stone, will be built above and below the lock walls, to secure a safe channel for boats; the crib work on the river wall will be extended above and below the lock 180 feet, and 90 feet above and below the land wall.

The walls of the crib work will be formed of hewn timber, 12 inches square, one on each side, and one in the centre, connected together by ties of sufficient length to pass through the walls, and placed at intervals of 8 feet, measuring from centre to centre; the sides which form the boat channel will be vertical, and the outer face of the river wall have the same batter as the river side of the lock wall; the width of the crib work at top will be 10 feet, and the ends of the ties will be fitted into the face of the timbers with a dove-tail joint. Each dove-tail joint, and each point where the timbers cross each other, or are boxed on each other in any part of the crib work, will be secured by a seasoned locust or white-oak tree-nail, 2 inches in diameter and 22 inches long, driven its whole length into the timbers below. Above water, the timber to be oak; below, of oak walnut, or cypress.

The cribs are to be filled with rubble sand stone, procured near the site of the works, closely packed in within 2 feet of the top of the crib work; the balance of the top of the cribs is to be filled with flat stones at least 2 feet long or deep, placed edgewise in courses across the wall so as to form a pavement 2 feet deep; the stones are to be closely fitted, and the last course in each crib is to be driven in with a maul or ram. The dam will be constructed of cribs of timber filled with timber as represented in the plans.

The length of the base of the dam will be 50 feet, the slope on the upper side will have a base of 4 feet to each foot in height, and on the lower side of the comb, a slope of $2\frac{3}{4}$ feet base to one foot in height.

After the sand, gravel, and loose stones shall have been removed as far as the engineer may deem necessary for a solid foundation, the timbers in the direction of the stream will be fitted to the rock in the channels which are won by the water, and secured by tree-nails of seasoned white-oak or locust timber, 2 inches in diameter, and let 18 inches into the rock, at the point intersected by the range timbers crossing them in the direction of the comb of the dam; these timbers will be connected with ties of suitable lengths and thickness, secured with tree-nails and iron bolts, if deemed necessary, and filled with stone to a height corresponding with the general level of the rock.

The timbers which lie in the direction of the stream will then be

laid at intervals of 10 feet from centre to centre, with the largest end down the stream, and be connected with the range of timbers to be laid so as to form three equal ranges of cribs; the range timbers are to be laid so as to form three equal ranges of cribs on each side of the comb of the dam as represented in the drawings; they are to be notched on the ties, by cutting away both timbers, so as to give a bearing of at least one superficial foot. The largest timbers are to be placed towards the lower side, and the smaller timbers in the upper side of the dam.

The outer faces of the timbers which form the upper and lower range are to be hewn, and the whole of the upper face of the crib work is to be made smooth, to receive the sheet piling. The range timbers upon which the covering is to be placed are to be hewn upon the sides which the covering will rest. The range timbers, to which the lower covering timbers are to be fastened, are to be secured in their places by closely fitted dove-tail joints, made with the ends of the ties. Each dove-tailed joint, and each point of contact where the timbers cross each other, is to be secured or fastened by well seasoned heart white-oak, or locust tree-nails, 2 inches in diameter and not less than 22 inches long.

The cribs are to be filled with rubble sand stone, procured from the river bed, or sand rock bluff, on the left bank of the river, immediately above the lock. The stones are to be closely packed in the largest stones are to be put into the lower cribs, or those on the lower side of the dam.

A double course of sheet piling is to be placed along the upper end of the dam; the planks are to be arranged so as to break joints, and be so put together as to be water tight; the piling is to extend down to the rock, and the top cut and fitted to make water-tight joints with the covering.

The covering of the slope of the dam is to be made with white-oak timbers, 6 inches thick and not less than 1 foot wide.

The timber is to be sawed or hewn square; the sides are then to be bevelled or cut off, so that when the pieces are laid together, the joints shall be close at the bottom and ½ inch open at the top. The upper covering timbers shall be at least 21 feet long, and the lower covering timbers be of one piece. Each piece of covering of timber shall be secured to the range timbers with spikes, ¾ of an inch in diameter and 15 inches long, and put in the proportion of three to each piece of timber, except the pieces which form the weir or comb of the dam, in each of which four spikes are to be used.

The heads of the spikes in the lower slope are to be sunk 1½ inches below the surface of the timber.

The timbers used in building the crib work of the dam are to be not less than 25 feet long, and 15 inches in diameter at the smallest end. All the timbers in the part of the dam above the surface of the water below the lock are to be of white-oak; the timbers below the water may be of oak, walnut, or cypress, or any other strong timber, approved of by the engineer.

The outer wall of the lock forms the abutment of the dam on the east side of the river. If, on opening the pit for the abutment on the opposite end of the dam, the rock should extend into the bank, and prove sufficiently solid for the foundation, the rock will be dressed off

to an even horizontal surface; the walls will then be laid. The courses of masonry in the abutment may vary from 30 to 10 inches in thickness; the thickest courses are to be placed nearest the foundation, but the lower course will not be less than 18 inches thick, nor each stone of the course be less than 2 feet wide and 4 feet long, or it will extend into the wall 4 feet. The headers will be of the same dimensions as those in the lock, and placed in each course of masonry, 9 feet from centre to centre; the spaces between the headers are to be filled up with one or two stretchers, the stretchers to have beds of two feet, and the beds of the headers and stretchers are to be dressed with a hammer or other tool, to give them an even surface throughout; the face of the wall must be dressed or cut, and the joints made to fit closely for 18 inches back nto the wall.

The backing stones are to be of large size, of good shape, and generally of the same thickness as those of the face stones of the course, their beds to be dressed evenly with the hammer, and be so laid as to break joints, and give every portion of the wall a fine bond. The coping stones will be secured with cramp irons in the same manner as the lock coping; they will be 18 inches thick, and will not contain less than 25 cubic feet; both beds of each stone will be dressed with a pick, or other tool, to an even surface.

If a solid rock foundation cannot be obtained, timbers will be laid on the porous shelly rock, hewn four square, of oak, walnut, beach or sugar-tree, 12 inches thick, and at least 12 inches wide in the foundation, of such lengths that they will extend through the entire width of the wall, and be laid parallel to each other, one foot apart, the spaces between them to be filled up with puddle, well rammed or pounded between them; and then this timber foundation to be covered with 3 inch plank, jointed closely, and well secured to the timbers by seasoned white-oak tree-nails, in such numbers and places as shall be deemed necessary by the engineer to secure the same.

A double row of sheet piling well tongued and grooved, so arranged as to break joints, will be placed along the upper wing wall from the dam through its whole length, and from thence be continued to the sheet piling of the culvert for water-power.

The culverts for the introduction of water into the canals around the lock and abutment of the dam, for hydraulic purposes, are to be constructed of wood, built on a timber and plank foundation, similar to the one specified for the timber foundation of the abutment.

The culverts will be 80 feet long, and at the ends to form parapets, to sustain the embankments; each side wall will be 16 feet wide, and continued that width 16 feet back towards the centre, so as to form two ranges of cribs, each 8 feet square, at each end of the culverts; the remaining part, or 48 feet of the interior of the side walls, will be 8 feet wide, and be connected by ties, every 8 feet, to the side timbers of the walls with dove-tail joints, so as to form a single row of cribs for that distance, of 8 feet square; between the outside walls, 7 water ways or sluices are to be constructed, 3½ feet wide by 4 feet high, by 5 ranges of timber placed on the plank floor of the foundation, parallel with the side walls; each piece of which timber will be 18 inches wide, and not less than 1 foot thick, counter hewed, and laid perpendicularly over the

other; the outside walls of the cribs are to be vertical, counter hewn, and the timbers resting on each other with a close joint; the cribs and water-ways are to be carried up 4½ feet; the water-ways are to be covered by a course of heavy timbers counter hewn, 18 inches thick, laid side by side, and boxed on 3 inches to the ranges of timber and side walls which form the water-ways.

The crib work of the parapet or end walls will be extended across the upper part of the covering timbers, and carried up to the height indicated by the plan; the face of the parapet wall, on the upper end of the culvert, will be covered with 2 inch plank 8 inches wide, the edges planed so as to make water-tight joints, and to be fastened to the timbers of the wall with 1½ inch white-oak seasoned tree-nails put in in sufficient numbers as directed by the engineer, to secure the plank facing, and to be driven through the plank 6 inches into the timbers they rest against.

The plank covering will extend over the ends of the ranges of timber which form the water-ways, except the timbers of the top and bottom courses, which will extend 1 foot beyond the line of the wall, to be framed into posts, which will form the bent of the frame work, at the head of the culvert, for the insertion of 4 sliding and 3 cast iron paddle gates, for the introduction of the water into the canal.

The sliding gates will be made 3 feet 9 inches wide, and four feet 9 inches long, out of strong white-oak timber 2 inches thick, and the pieces not more than 5 inches wide, morticed by a tenon ¾ of an inch thick, into an outside frame, 4 inches wide, of the same thickness, all planed smooth, and fitted with true close joints. Each lateral piece of the gate to be fastened to the outside frame by a seasoned white-oak pin ¾ of an inch in diameter, through the frame and centre of each tenon; and the gate centrally through its longest side to be fastened to the inner side of a shaft (cut to receive it) 5 by 6 inches square, and extending from the bottom of the culvert to within 1 foot of the bottom of the cap on the posts of the head gate frame. The gate to be secured to the shaft by a row of pins of seasoned white-oak, 1½ inches in diameter, through the centre of the broadest side of the shaft and the centre of each lateral piece of the gate. The shafts will be let partly into the ties of the frame for the head gates, and be secured by a piece of timber notched and fastened to the cap and ties, to form grooves for the shafts to move in. The sliding gates will run in rabbits cut in the posts of the head gate frame for that purpose.

The ties, caps, and pieces of timber in the other parts of the head-gate frame, are square timbers 10 by 12 inches and of such lengths as are shown in the plan.

The cribs will be filled with gravel, if it can conveniently be found, otherwise they will be filled with earth well packed in, and the space between the head or parapet walls of the culvert, over the covered timber, will be puddled in the best manner, as well as the filling on each side of the structure and the sheet piling.

A double row of sheet piling will be placed in front of the culverts, and carried down on the lower side to midway the length of the wall, to meet the sheet piling extending from the lock and abutment.

In the 18 inch timbers for water-ways, none will be admitted of less length than 27 feet after they are laid, measuring on the line of the range,

exclusive of the lap in joining, which must be formed by cutting away one-half of the timber in its vertical height, for two feet in length, so that the lap will be on the upper side of the timber and in the direction of the head of the culvert; the timbers are to be joined with a true close joint, and secured by two well seasoned white-oak tree-nails, 2 inches in diameter, placed 18 inches apart, and sunk through both laps 12 inches into the timber below; the 18 inch timbers in the water-ways will be secured by similar tree-nails every six feet, sunk through the top course and one foot into the timbers that they rest on; at every point where a joint is framed in the crib work, or a timber crosses another, seasoned white oak tree-nails, 2 inches in diameter and 22 inches long, must be sunk into the timber their whole length.

The covering timbers for the culverts must be of white-oak, as well as all the timbers above the water; for those below, which is the principal part of the structure, as the covering timbers are submerged, walnut, oak, beech, and cypress may be used.

After the sheet piling and covering the dam shall have been completed, the space above the dam shall be filled with the best gravel that can be procured within one and a half miles of the site of the dam, on the river bank, to be approved of by the engineer, without removing the earth above it to a greater depth than 4 feet; the gravel shall extend above the dam 70 feet, as represented in the drawings.

The space back of the lock will be filled with clay and gravel mixed, and be well packed. In puddling, gravel, together with a small portion of clay or loam, shall be spread on in a regular layer not more than 6 inches thick, which will be kept wet and thoroughly mixed by treading of oxen, or horses, or a ram; successive layers of the same material and thickness, with the process of wetting and mixing, will be repeated until the requisite quantity shall be obtained.

Guard-banks will be raised from the lock and abutment, and extended up the river on both sides, about two miles, of such height as may be deemed necessary to secure the bank from the overflowing of the floods.

Ten feet under the centre of the bank will be grubbed free from roots, and the timber on the spaces which the bank will occupy beyond the grubbing will be chopped even with the surface of the earth, and, with the roots, brush and logs, be removed to ground lying between the bank and the river. The earth on the space which was grubbed, to the depth of one foot, shall be removed to the outside of the bank, and the ditch formed in the centre of the space so cleared off of 3 feet wide at the top and 1 foot at the bottom, and 18 inches deep, or two and a half feet deep from the surface of the earth. No sticks, brush, leaves, grass or timber of any kind shall be permitted to go into the bank; and in putting on the earth it shall be placed in successive layers of not more than 18 inches thick, and kept as nearly level as can be conveniently done. The earth to form it must be taken from the ground between the bank and the river.

The canals around the lock and the abutment will be excavated, except near the culverts, four feet below the water in the pool of the dam—will be 26 feet wide on the bottom, with slopes to the banks of one and three-quarter feet base to one foot perpendicular rise. The cor-

tractor will be required to throw the excavation on either side of the canals or on both sides, and to keep the surplus earth of nearly an uniform width and height under the direction of the engineer. The price bid for excavation for these canals must cover the cost of the clearing and grubbing where it occurs.

Mount Carmel, *Aug.* 21, 1838.

Notice to Bidders.

Propositions must state a price for each item of work given in the estimates, which will be understood as covering all expenses.

The price bid for excavation in the lock and abutment pits, below water, and the general items for the dam, must include all costs for coffer-dams and bailing water. The price bid for masonry will include all the cost of furnishing, dressing, laying in cement, and delivering the stone in the wall, when the same shall be completed.

The price bid for excavation will be understood to include all the various kinds of earth which may be found, together with all the detached stones which measure less than one-third of a cubic foot.

The price bid for timber in the several structures will include the entire cost of delivering, counter-hewing, raising, framing, tree-nailing and bolting.

The price bid for plank will include the cost of furnishing it on the ground, planing, jointing, spiking, &c.

The price bid for iron will include the cost of delivering, working, driving, and every variety and form of work to which it may be used in the structures.

The item of square timber, in the estimate of the quantities in the gates and mitre sills, is an exception, in the proposals, to the rule in relation to the timber, as it contemplates only the delivery of the best kind of large white-oak timber, rough hewn, selected especially for the use intended; that item, and the bid for wood work of the lock-gates and mitre sills complete, will cover all the cost of constructing the gates, furnishing the plank used thereon, and rendering them ready for use, with the exception of the cast and wrought iron, which will be paid for by the pound.

The contractor will furnish the hydraulic cement, sand, and every article used in the work, which will be subject to the approval of the engineer; and any article which may be delivered in his absence, or which he will not receive, as not fit or of suitable quality to go in the works, shall be immediately removed beyond the reach of the workmen, at the expense of the contractor.

Every part of the work connected with the canal will be subject to the most rigid inspection of the Commissioner and engineer, and the contractors will be expected to conform in all respects to their directions.

The right will be reserved of making any alterations in the plans of the work which further observation may show to be necessary; and if such change shall increase the cost of the work, the amount of this increase shall be estimated by the engineer, and paid to the contractor.

Inasmuch as the water has hitherto been too high for a visible examination of the bed of the river, the site now marked out for the works may be changed a short distance, not exceeding 200 feet, either up or down the river; and also, as the quantities of excavation, timber foundations, and amount of masonry will depend, to some extent, on the character of the rock bed of the river where the pits shall be opened, the estimates of the quantities now exhibited may vary in amount, from the careful examination and measurement of the work in its progress; but this shall not furnish ground to claim an extra price on any of the items proposed for.

Bidders to whom the work may be assigned, if not themselves good mechanics, will be required to employ one to superintend these structures, who shall be approved of by the Commissioners or engineer; and if, at any time during the progress of the work, any mechanic or workman employed on the work shall be thought to be incompetent, or unfaithful, or disorderly, such mechanic or workman shall be promptly discharged by the contractor.

In case the contractor fails to prosecute his work in such manner as to afford satisfactory evidence that it will be completed by the time stipulated, the right will be reserved to the Commissioners to declare the contract abandoned and void, at their option, to place an agent thereon, who shall employ hands, buy materials, and complete the work, the expense of which shall be charged to the contractor, and deducted out of the final settlement of his account.

Contractors will be expected to superintend their work in person. The sub-contracting of any part of the work (except in procuring materials) without the consent of the Commissioners, will subject the contractor to the liability of forfeiting the contract, at their option.

The contractors will procure the necessary timber and stone by purchase, and the work and materials will be at his risk.

The work must be commenced by the 14th of Sept. next, and completed by the 1st of November, 1840.

Bidders are notified that no extra allowance in addition to contract prices can in any case be allowed, and are requested to give the work a close examination, so that they may judge correctly of its value.

The proposals will state, in separate items, the prices of the masonry, on the contingency of the stone being procured at either of the quarries near Petersburgh, Portersville, or Gaiter's on White river. It is the intention to have all the quarries opened to some extent, and a portion of the stone exposed, that their qualities may be ascertained, and in due time a selection made.

The contractors will be paid for opening new quarries a reasonable compensation, to be determined by the engineer, if the stone should prove of an inferior quality; and in case of receiving stone at other places than the quarries mentioned, to be governed in the price of the same by comparison of the distance they may be procured from, with the distance from the site of the quarries mentioned.

820 yards of stone have been delivered at the site of the works, for which the sum of $8 33 per yard has been estimated. These stone will be delivered to the contractor at that price, to be used in the works,

and the amount will be deducted from the total sum which will be due to him on his contract price.

No deduction will be made for stone which may yield to the influence of the atmosphere, and any portion which may have failed, or shall fail, will be excluded from the work.

The payments will be made, on the estimates of the engineer, at intervals of one month each as nearly as can conveniently be done, in checks either on the Bank of Mount Carmel or the Bank of Vincennes, on articles delivered at the site of the works or for stone quarried and delivered near the quarry.

By order of the Commissioners.

D. BURR, *Principal Engineer.*

Mount Carmel, *Aug.* 21, 1838.

REPORT

OF THE

BOARD OF FUND COMMISSIONERS

TO

THE LEGISLATURE OF ILLINOIS.

December 26, 1838.

Laid on the table, and 5,000 copies ordered to be printed.

Fund Commissioners' Office,
Vandalia, December 24, 1838.

Sir: We have the honor to enclose a report made in pursuance of a call from the House of Representatives, with accompanying documents.

Yours, respectfully,
THOMAS MATHER,
M. M. RAWLINGS,
CHARLES OAKLEY.

To the Speaker
of the House of Representatives.

Vandalia, *December* 24, 1838.

In obedience to a resolution of the House of Representatives of the 8th instant, the undersigned, Fund Commissioners, respectfully report:

That by reference to an act of the last General Assembly, entitled "An act concerning the surplus revenue," it will appear that the Fund Commissioners were directed to pay a certain amount of the surplus revenue, which had been appropriated to the school fund, on account of the subscription of three millions of stock which they were authorized to subscribe to the State Bank of Illinois and the Bank of Illinois. This sum, amounting to three hundred and thirty-five thousand six hundred dollars, was thus paid to said banks; leaving the sum of two millions six hundred and sixty-four thousand four hundred dollars due on said subscriptions. To meet this payment, two thousand six hundred and sixty-five bonds, of one thousand dollars each, were issued and disposed of at par.

William Walters, Public Printer.

The amount of bonds or certificates of internal improvement stock which have been issued, is two millions two hundred and four thousand dollars, being in two thousand two hundred and four certificates, of one thousand dollars each. Of these, one hundred was sold at a premium of five per cent., and the remainder at par. For more particular information relative to the disposition of all the bonds, the Commissioners would beg leave to refer to their report to the Auditor of Public Accounts, of December 1st, 1837, a copy of which is herewith transmitted, marked A.

In accordance with the provisions of the last clause of the 18th section of the internal improvement act, there has been paid to counties one hundred and forty-four thousand seven hundred dollars. The respective counties which have received a dividend from this appropriation, with the amount thereof, are detailed in the accompanying document, marked B.

The unexpended balance remaining at the disposal of the Commissioners is deposited in banks, on general deposite, and at an interest at the rate of six per cent. per annum. It is used by the banks as other similar deposites, and paid upon the checks of the Commissioners at any time, and in such sums as they may choose to draw. The total amount is one million nineteen thousand six hundred and four dollars and four cents; the particular disposition of which appears in the account current, marked C.

The amount paid upon the drafts of the Board of Commissioners of Public Works, is one million one hundred and forty-two thousand twenty-seven dollars and five cents, and is charged, as directed by said Board, to the following accounts:

Great Wabash river	$2,316 00
Illinois river	5,100 00
Rock river	2,300 00
Kaskaskia river	2,279 37
Little Wabash river	3,799 76
Great Western mail route	94,932 07
Central railroad	200,127 38
Alton and Mt. Carmel and Alton and Shawneetown railroad	126,516 57
Northern Cross railroad	521,420 25
Branch of Central railroad	56,789 09
Peoria and Warsaw railroad	83,370 84
Bloomington and Mackinaw railroad	43,075 72
	$1,142,027 05

The statement marked D exhibits the amount drawn by the order of each Commissioner, the aggregate of which will be found to correspond with the foregoing accounts.

The amount received by the Commissioners, on account of their services, is six thousand dollars. That portion of this sum to be accounted for by each individual appears in the account current referred to above.

The statement marked E shows the amount paid for clerk hire, as well as the amount paid the Secretary of the Board, together with the incidental expenses, amounting, in all, to four thousand eight hundred and seventy dollars and nine cents. There is no one employed by the Board, except their Secretary, whose compensation is $1,000 per annum.

By reference to the accompanying account, it appears that the total amount of funds which have come into the hands of the Commissioners, is five millions six hundred and sixty-eight thousand and three dollars and ninety two cents, and is derived from the following sources:

State of Illinois - - - - - -	$477,919 14
Bonds - - - - - - -	4,869,000 00
Premiums, dividends, and interest - - -	321,084 78
	$5,668,003 92

The amount disbursed is four millions six hundred and forty-eight thousand three hundred and ninety-eight dollars and eighty-eight cents, as follows:

Amount paid for bank stock - - -	$3,000,000 00
Amount paid drafts of Commissioners of Public Works	1,142,027 05
Amount paid Counties - - - -	144,700 00
Amount paid interest - - - -	292,250 00
Amount paid Fund Commissioners - -	6,000 00
Amount paid incidental expenses - -	4,870 09
Amount paid for iron, locomotives, &c - -	58,552 74
Balance - - - - -	1,019,604 04
	$5,668,003 92

It may may not here be improper to state, that the interest is paid upon the bonds to the 1st of January ensuing. The interest received is calculated to the 25th November, and the dividends from the State Bank, to the first of the present month. On the first of January, the semi-annual dividend will be declared by the Bank of Illinois. We are assured that it will not be less than three per cent., making thirty thousand dollars which will then pass to the credit of the dividend account.

Of the exchange deposited with the Bank of Illinois, three hundred and fifty thousand dollars has not been disposed of; when this shall be sold, it will, in like manner, add to the amount of credits on account of premiums.

Respectfully submitted.

THOMAS MATHER,
M. M. RAWLINGS,
CHAS. OAKLEY,
Fund Commissioners.

A.

FUND COMMISSIONERS' OFFICE,
Springfield, December 1, 1837.

SIR: The act to establish a general system of internal improvement requiring that the Fund Commissioners make quarterly reports to you, the undersigned, in pursuance of that provision, beg leave to report:

That since they had the honor of forwarding you their report of the 1st of June, they have, for the most part of the time, been absent from the State, on business connected with their official duties, and, for a considerable part of that time, have been separated from each other. For these reasons they did not report to you on the 1st of September. They beg leave now to embrace the whole of their operations for the last six months in one report.

The State Bank and Bank of Illinois having accepted the proposition of the Legislature for an increase of their capitals, the amount directed to be invested in the stock of these institutions by an act, entitled "An act concerning the surplus revenue," was subscribed to the State Bank for 2,356 shares—$235,600; and on account of subscription to the Bank of Illinois, $100,000.

Soon after the adjournment of the special session of the Legislature, the Commissioners proceeded to New York for the purpose of effecting a loan for the payment of the remainder of the subscriptions of the State to the banks, as well as for means for the prosecution of the several works of internal improvement. After advertising in several of the newspapers of that city, that bids would be received for loans for these purposes, they were much disappointed, on the arrival of the day fixed for opening the bids, to find that no offers were made.

They had hoped that, notwithstanding other States had failed to procure means for similar purposes, their own State might find more favor with capitalists. No disposition being manifested by them to take our bonds, an amount sufficient to pay the balance due, and to become due, the banks, was offered to these institutions at par, viz: to the State Bank, 1,765 bonds of $1,000 each, and to the Bank of Illinois, 900 bonds of the same denomination. This offer has been accepted by both banks.

Subsequently, and after many efforts on the part of the Commissioners to dispose of a portion of the internal improvement bonds, they succeeded in selling to James Irvine one thousand bonds of $1,000 each; to Nicholas Biddle, one thousand bonds; and to Hall and Hudson, one hundred bonds all of the same denomination; making in all twenty-one hundred thousand dollars, ($2,100,000) at par.

They also sold to Boorman and Johnson one hundred bonds of the same amount, at five per cent. premium. The two last mentioned sales were for cash on delivery of the bonds; the first two are to be paid for in sums of one hundred and fifty thousand dollars each per month.

The amount of the drafts of the Board of Public Works, paid since the 1st of June, is one hundred and twenty-one thousand and fifty-six dollars and thirty-one cents. All of which is respectfully submitted.

THOMAS MATHER,
CHARLES OAKLEY.

LEVI DAVIS, Esq.
Auditor of Public Accounts.

B.

Statement showing the amount paid to counties under the provisions of the last clause of the 18th section of the act of the Legislature, passed on the 27th day of February, 1837, "to establish and maintain a general system of internal improvement."

No.	Counties.	Date.	Amount.
1	Calhoun county - - -	November 10	$2,727 50
2	Greene " - - -	October 29	30,205 00
3	Monroe " - - -	October 29	6,900 00
4	Randolph " - - -	October 16	14,237 50
5	Johnson " - - -	December 14	5,415 00
6	Pope " - - -	November 1	9,387 50
7	Hamilton " - - -	October 30	7,027 50
8	White " - - -	December 10	15,535 00
9	Lawrence " - - -	October 29	11,125 00
10	Crawford " - - -	October 25	8,760 00
11	Clarke " - - -	December 8	8,532 50
12	Jasper " - - -	December 8	1,037 50
13	Effingham " - - -	November 1	2,637 50
15	Knox " - - -	November 10	5,850 00
16	Warren " - - -	October 30	6,532 50
17	Bond " - - -	October 29	8,790 00
			144,700 00

C.

Dr. *Fund Commissioners, in account current with the State of Illinois.* Cr.

To amount received—				By amount paid—		
For 4,869 bonds, at $1,000 each -			$4,869,000 00	For Bank stock in State Bank - -		$2,000,000 00
State Treasurer - - - -			477,919 14	For Bank stock in Bank of Illinois - -		1,000,000 00
For interest on deposites in the Bank of Illinois - -	$13,450 25			On drafts of Commissioners of Public Works		1,142,027 05
For interest on deposites in the State Bank of Illinois - -	29,830 00			Counties - - - - - -		144,700 00
For interest on deposites in the United States Bank - -	32,924 01			Interest on bond discounted in State Bank - - -	$110 00	
			76,204 26	Interest to United States Bank on 4,869 bonds - -	292,140 00	
For premium on 100 bonds sold to Boorman & Johnson, at 5 per cent.	5,000 00					292,250 00
From Bank of Illinois, for premium on $200,000 sold by them	5,000 00			Boorman & Johnson, on account of railroad iron - - - - -		42,000 00
From State Bank, for premium on $1,216,000 sold by them	24,320 00			M. M. Rawlings - - - -		2,000 00
For premium on checks sold by Fund Commissioners - -	3,000 00			Thomas Mather - - - -		1,500 00
For premium on check for $30,000, sold Canal Commissioners	600 00			Charles Oakley - - - -		2,500 00
For Virg'a land scrip on $31,445 60,	1,310 52			Murray McConnel, on account of locomotives, fixtures, &c. - - - -		16,552 74
			39,230 52	Incidental expenses - - -		4,870 09
For dividends in Bank of Illinois	32,500 00			Balance deposited in the following Banks:		
For dividends in State Bank	173,150 00			Bank of the United States -	$4,384 01	
			205,650 00	Bank of Illinois - -	280,228 27	
			5,668,003 92	State Bank - -	630,022 99	
				Vandalia Branch Bank -	104,968 77	
						1,019,604 04
						$5,668,003 92
1838, Dec. 24. To balance brought down -			$1,019,604 04			

D.

Statement showing the amount drawn by the Board of Public Works for each separate work, viz:

For the Northern Cross Railroad - - -		$521,420 25
Of which sum—		
Murray McConnel, C. P. W., has drawn	$463,819 47	
M. K. Alexander, C. P. W. - -	49,350 78	
Joel Wright, C. P. W. - -	8,250 00	
For the Central Railroad - - - -		200,127 38
Of which sum—		
Elijah Willard, C. P. W., has drawn	$44,650 00	
M. K. Alexander, C. P. W. - -	392 18	
Murray McConnel, C. P. W. - -	12,321 86	
John Dixon, C. P. W. - -	53,852 67	
Ebenezer Peck, C. P. W. - -	38,071 67	
William Kinney, C. P. W. - -	15,438 62	
J. Stephenson, C. P. W. - -	35,400 38	
For the Alton, Mt. Carmel and Shawneetown Railroad		126,516 57
Of which sum—		
M. K. Alexander, C. P. W., has drawn	$36,024 92	
William Kinney, C. P. W. - -	47,569 95	
Elijah Willard, C. P. W. - -	42,921 70	
For the Great Western Mail Route - - -		94,932 07
Of which sum—		
William Kinney, C. P. W., has drawn	$57,783 65	
M. K. Alexander, C. P. W. - -	37,148 42	
For Central Branch Railroad - - - -		56,789 09
Of which sum—		
M. K. Alexander, C. P. W., has drawn	$56,789 09	
For the Peoria and Warsaw Railroad - - -		83,370 84
Of which sum—		
Joel Wright, C. P. W., has drawn	$83,370 84	
For Bloomington, Mackinaw and Peoria Railroad -		43,075 72
Of which sum—		
Murray McConnel, C. P. W., has drawn	$43,075 72	
For Great Wabash river - - - - -		2,316 00
Of which sum—		
M. K. Alexander, C. P. W., has drawn	$2,316 00	
For Illinois river - - - - - -		5,100 00
Of which sum—		
Murray McConnel, C. P. W., has drawn	$5,100 00	

STATEMENT D—Continued.

For Rock river - - - - - -		$2,300 00
Of which sum—		
John Dixon, C. P. W., has drawn -	$2,300 00	
For Kaskaskia river - - - - -		2,279 37
Of which sum—		
William Kinney, C. P. W., has drawn	$2,279 37	
For Little Wabash river - - - - -		3,799 76
Of which sum—		
Elijah Willard, C. P. W., has drawn	$3,799 76	

E.

Statement of items of incidental expenses.

Amount paid Secretary pro. tem. and Secretary -	$1,500 00
Amount paid Secretary of State for certified copies of the laws - - - - - - -	227 55
Amount paid for engraving plates for bonds, and printing same - - - - - - -	1,745 00
Amount paid G. W. Carruthers, late Secretary of Internal Improvement Board, for services - -	50 00
Amount paid Wm. H. Lee, for transporting two trunks of bonds from Vandalia to Springfield - -	35 00
Amount paid for office rent, furniture, postage and office expenses in Vandalia - - - -	130 98
Amount paid for postage, stationery, &c. while the office was kept at Springfield - - - -	29 00
Amount paid for office rent in New York - -	400 00
Amount paid for stationery - - - -	100 53
Amount paid for office furniture, - - - -	98 00
Amount paid clerks for filling bonds and numbering coupons	316 70
Amount paid for two iron trunks with India rubber covers	57 50
Amount paid for conveying bonds to Illinois and back to New York - - - - -	45 19
Amount paid for coal for use of office - - -	40 36
Amount paid for Railroad Journal - - -	10 00
Amount paid for porterage - - - -	7 50
Amount paid for advertising for proposals for loans -	30 00
Amount paid for stationery - - - -	17 50
Amount paid for postage - - - - -	29 27
	$4,870 09

ALBION AND GRAYVILLE RAILROAD.

January 2, 1839.

Read, and referred to a Committee of the Whole House.

Mr. Smith of Wabash, from the Committee on Internal Improvements, made the following

REPORT:

The Committee on Internal Improvements, to which was referred a bill for "An act to incorporate the Albion and Grayville Railroad Company," report:

That, in the opinion of the committee, it is inexpedient for the Legislature to authorize corporations or individuals to construct railroads or canals calculated to come into direct competition with similar works now in a course of construction under the State system of internal improvement. It is well known that there exists an honest difference of opinion in regard to the policy and probable revenue to be derived from the State works; and, therefore, the committee deem it unwise for the Legislature, in the infancy of the system, to abstract, from any portion of her own public works, the profits and receipts upon which the friends and advocates of the system have predicated their support of it, and thus impair the confidence of the people in its ultimate success.

The committee are free to admit that there may be extreme cases in which, in the adoption of the State system, the wants of some portions of the people have been unavoidably left unprovided for, which might justify a departure from this salutary rule of legislative action. In the case, however, now under consideration, the country proposed to be accommodated by the railroad mentioned in the bill is already provided for in the system, and the State improvement is in a state of forwardness approximating to completion.

The committee would take this occasion to draw a marked distinction between the construction, by companies, of lateral branches of railroads from the interior to intersect the State improvements, and thereby throw trade and travel upon the latter, and those works calculated to withdraw the business from the main lines, and thus reduce the revenue which the State would otherwise receive.

It is true that there is a provision in the bill under consideration, reserving to the State the privilege of purchasing the road under certain restrictions. But as objections are urged against the State system on account of its magnitude and probable cost, it seems to the committee that the granting of charters at present, with the view of augmenting this objection, would be impolitic.

The committee, entertaining these views of the subject, do, on general principles of State policy alone, and not with any hostility to this particular bill, report the same back to the House, and recommend its rejection.

REPORT

OF

THE BOARD OF PUBLIC WORKS,

RELATIVE

To the survey of a route from Charleston, through the seat of justice of Clark county, to the Wabash river.

January 11, 1839.

Referred to the Committee on Internal Improvements.

To the Hon. the Speaker
of the House of Representatives:

Sir: In accordance with the following order of the Board of Commissioners of Public Works, to wit:

"Mr. Alexander, Commissioner of the fourth judicial circuit, submitted to the Board his report, and accompanying documents, of the survey made in compliance with the requisition of the seventh section of the internal improvement law; which were read, and, on motion,

"*Ordered*, That the Board decline giving any opinion on the question, whether a turnpike or railroad would be best calculated to promote the interests of the points designated in said survey, and the country through which the same may pass; and that the report of the said Commissioner, and all the accompanying documents, be submitted to the General Assembly, that they may make such decision on the subject as they deem best; and that they be requested to make an appropriation to defray the expenses incurred in making the same survey:"

I herewith transmit the report of the Commissioner of the fourth judicial circuit, together with the accompanying documents, made in compliance with the requisition of the seventh section of the internal improvement law.

I have the honor to be, very respectfully,
Your obedient servant,
WILLIAM PRENTISS,
Secretary of the Board of Public Works.

To the COMMISSIONERS
of the Board of Public Works of the State of Illinois:

The seventh section of the act, entitled "An act to establish and maintain a general system of internal improvement," makes it the duty of the acting Commissioner of the fourth judicial circuit to cause to be surveyed a route for a railroad commencing at Charleston, in Coles county, and running through the county seat of Clark county to the most eligible point on the Wabash river between York and the point where the line dividing the States of Indiana and Illinois leaves the river. In compliance with the requisitions of the law, I organized an engineering party the latter part of August for that service, and all the necessary preparations were made, and the party were at Charleston, ready to commence the survey, but owing to every member of the party being taken sick, the service was postponed until about the 9th day of October, when the examination of the country between Charleston and Marshall, the county seat of Clark county, was commenced. After running several lines, one was adopted as the most favorable, but so far from a direct line as to increase the distance between the two points considerably. Two points having been spoken of as possessing claims to the termination of the said survey on the river, I directed a survey to be made to each point, and the comparative claims of each presented by way of estimated cost, &c.; both of which have been run, and a profile and estimate of each herewith submitted. From all the information obtained from actual survey and examination of the country, as well as from the general wants of the community, as also their expressed desires on the subject, so far as I am possessed of them, I would recommend a turnpike road as far preferable to a railroad; and from a conviction of the correctness of that conclusion, I proceeded to have a survey and estimates made for such a road. You will see by reference to the estimates of the engineer, that, in point of economy in building, the saving will be considerable, and it will, no doubt, to a much greater extent, subserve the public interest.

Notwithstanding the undersigned was required to make the above named survey, yet the Legislature had omitted to make an appropriation for the purpose of defraying the expenses of the same. The only alternative, therefore, was to omit a compliance with the requisitions of the Legislature in making the survey, or furnish the means of doing it myself, and trusting to the future action of the Legislature on that subject. The latter course was adopted, and I would now ask that the Board bring the subject before the Legislature for their action.

The amount expended in the survey is as follows, viz:

For outfit of party, subsistence and way expenses -	$218 22
For engineer's compensation - - - - -	284 28
For labor - - - - - - - -	301 91
Total amount - - - - - -	804 41

Which will appear by the accompanying vouchers. All of which is herewith submitted.

M. K. ALEXANDER,
Commissioner.

PARIS, ILLINOIS, *December* 1, 1838.

MILTON K. ALEXANDER, Esq.

Commissioner of the Board of Public Works.

SIR: Your instructions "to survey a route for a railroad and also for a turnpike from Charleston, in Coles county, via the county seat of Clark county, to the most eligible point on Wabash river, between the States of Indiana and Illinois, and to estimate the cost of constructing the same," have been complied with; and in relation thereto, I now respectfully report.

The first, or railroad survey was commenced at the proposed depot, situated on the Central branch railroad, about eight hundred feet northerly of Charleston court-house, and continued on a direct line to Marshall; but the country proving much broken on Embarrass river and its eastern tributaries, it was found to be an injudicious location, and a second, or return survey was made northerly of the direct line to avoid the broken ground at the forks of Mill creek; after passing which, it was continued straight to Charleston, and the country found more favorable than the first, but it was yet far from a judicious location; the principal objections were heavy graduation and too great an increase of distance. The most favorable railroad line was therefore to be found between the two; and, after examining the country as thorough as time would permit, the approximate location was made direct from Charleston, seven degrees northerly of the first line for twenty miles to the forks of Mill creek, where a deflection of thirty-five degrees to the right was made, and the line continued direct to Marshall, passing on the northerly side of the creek and nearly parallel with it for about three miles, where it crossed a deep valley and a small stream, the last and almost only obstruction between the forks of the creek and Marshall. From Marshall, two approximate surveys were made to Wabash river, the first, on nearly a direct course over favorable ground, to Aurora, a town located on the river about two miles above Darwin. The other was traced from the village of Darwin to Marshall with but one curve, and that of 10,000 feet radius.

TURNPIKE SURVEY.

The railroad lines from Marshall to Aurora, and Darwin, are adopted for the turnpike locations, as time would not allow other surveys to be made; but by more sinuous lines the cost of construction could be much reduced. At the junction of the National road and Hamilton street, in Marshall, the turnpike survey was commenced, and generally continued on the State road recently located between the direct, or first experimental line, to Charleston and the one adopted for the railroad location; and the following distances, elevations, and depressions were taken upon it by a theodolite, with the vertical arch divided to a minute of a degree.

Table of distances, elevations, and depressions.

Stations.	Angles of elevation and depression.			Distances.	Remarks.
		deg.	*min.*		
1	- - - -			-	Marshall.
2	Depression		24	7,458	
3	Depression	2	15	1,094	
4	Elevation		2	616	
5	Depression	3	25	259	
6	Elevation	6	35	221	
7	Elevation	2	6	725	
8	Elevation		6	2,448	
9	Depression	4	12	668	
10	Elevation	1	0	583	
11	Elevation	9	20	231	
12	Elevation		30	710	
13	Depression	1	56	1,042	
14	Elevation	3	15	365	
15	Elevation		12	4,284	
16	Elevation		3	8,454	
17	Depression	2	54	710	
18	Elevation	2	49	570	
19	Level - - - -			3,754	
20	Depression	2	15	1,080	To Mill creek.
21	Depression		10	574	
22	Depression		34	1,303	
23	Elevation	6	36	666	
24	Elevation		6	1,883	To a branch of Mill creek.
25	Depression	3	52	575	
26	Elevation	4	29	473	
27	Elevation		38	10,041	
28	Depression		4	5,982	
29	Depression		33	474	
30	Depression	2	50	253	
31	Elevation	2	10	288	
32	Depression	1	10	195	
33	Depression	5	8	210	
34	Elevation	4	30	276	
35	Level - - - -			3,277	
36	Depression	4	-	1,047	
37	Elevation	2	43	717	
38	Elevation		13	9,259	
39	Elevation	1	37	1,120	
40	Depression		33	872	
41	Depression	2	40	530	
42	Elevation	1	37	660	
43	Elevation		40	430	
44	Depression		30	1,573	
45	Depression	2	27	1,288	
46	Depression		3	699	
47	Elevation	1	45	1,022	
48	Elevation		40	1,914	
49	Elevation		6	4,121	
50	Elevation		43	1,585	
51	Depression		10	763	
52	Elevation		28	3,361	
53	Depression		30	1,981	
54	Depression		49	1,463	
55	Depression		26	1,588	
56	Elevation	1	23	518	
57	Depression		45	886	
58	Elevation	1	40	670	

TABLE—Continued.

Stations.	Angles of elevation and depression.			Distances.	Remarks.
		deg.	*min.*		
59	Elevation		50	1,157	
60	Depression	1	8	1,315	
61	Depression		4	2,160	
62	Depression		48	1,370	
63	Depression		10	5,345	
64	Depression	1	48	1,125	
65	Elevation		23	855	
66	Elevation		50	1,836	
67	Depression		12	1,724	
68	Elevation		53	1,427	
69	Depression		7	6,441	
70	Depression	1	55	315	
71	Elevation	2	15	265	
72	Depression		30	460	
73	Depression	4	27	1,289	To Embarrass river.
74	Elevation		15	400	
75	Elevation	3	55	946	
76	Elevation	1	55	743	
77	Depression		30	854	
78	Elevation	1	13	1,204	
79	Depression		50	739	
80	Elevation		5	8,790	
81	Depression		22	2,476	
82	Depression	2	10	439	
83	Elevation	4	-	200	
84	Elevation		40	1,313	Charleston.

Plans and profiles of both the railroad and turnpike surveys are in progress, and to them I must refer the honorable Board for further particulars respecting their locations.

The principal obstructions to building either a railroad or turnpike are to be found in passing Embarrass river, the branches of Mill creek and vallies adjoining them, and the slough near Darwin; but the locations must be regarded rather as experimental than approximate. Want of time, (a multiplicity of difficulties preventing the prosecution of the surveys before the 9th of October last,) together with the uncertainty of building the roads, are my apologies for not presenting for your consideration more feasible routes. The estimates predicated on these lines will, therefore, exceed the cost of construction on more favorable locations, which can undoubtedly be found; but it is believed they are sufficiently accurate to enable the honorable Board of Public Works to determine whether a railroad or turnpike will best promote the public good.

ESTIMATE of graduating the railroad for single railway, **16** *feet in width and* **14** *on embankments, the maximum grade being* **40** *feet per mile.*

	Length in miles.	Cubic yards of excavation put into embankment.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Cubic yards of washed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Rods of grubbing & clearing.	Price per rod.	Amount.	Lineal ft. of bridging.	Price per foot.	Amount.	Amount of sundries.	Total amount.
			cts	$		*cts*	$		*cts*	$		$			*cts*	$		*cts*	$	$	$
From Charleston to Marshall - - -	27½	363,588	24	87,261	96,912	12	11,629	106,000	12	12,720	6,700	5	33,500	10,300	50	5,150	210	28	5,880	4,000	160,140
From Marshall to Aurora	7	21,000	24	5,040	41,600	12	4,992	–	-	–	500	5	2,500	1,700	50	850	-	-	-	500	13,882
From Marshall to Darwin	8 3-7	122,000	24	29,280	62,000	12	7,440	–	-	–	550	5	2,750	2,100	50	1,050	-	-	-	300	40,820

Total estimate of graduation from Charleston to Aurora	$174,022 00
Add for 34½ miles of superstructure, at $5,000 per mile	172,500 00
Total estimate from Charleston to Aurora	346,522 00
Per mile	10,044 00

For the form of the track and details of estimate, see my report to the Board of Public Works, dated June 1, 1838.

Estimate of graduation from Charleston to Darwin	200,960 00
Add for 35.9 miles of superstructure, at $5,000 per mile	179,500 00
Total estimate from Charleston to Darwin	380,460 00
Per mile	10,598 00

***ESTIMATE** of the turnpike graduated 30 feet in width in cut and 26 feet on embankments, the maximum inclination being four degrees.*

	Length in miles.	Cubic yards of excavation put into embankments.	Price per yard.	Amount.	Cubic yards of borrowed earth.	Price per yard.	Amount.	Perches of masonry.	Price per perch.	Amount.	Rods of grubbing & clearing.	Price per rod.	Amount.	Lineal ft. of bridging.	Price per foot.	Amount.	Amount of sundries.	Total amount.
			cts	$		*cts*	$		$	$		*cts*	$		*cts*	$	$	$
From Charleston to Marshall - - -	27½	126,670	24	30,352	314,632	12	37,755 84	3,823	5	19,115	1,940	25	4,852 75	400	12	4,800	2,000	98,876 39
From Marshall to Aurora	7	3,228	24	774	81,418	12	9,770 16	279	5	1,395	1,700	25	425 00	-	-	-	150	12,514 88
From Marshall to Darwin	8 3-7	10,500	24	2,520	119,374	12	14,324 58	182	5	910	2,100	25	525 00	100	12	1,200	300	19,779 88

Total estimate of graduation from Charleston to Aurora - - - - - - - - -		$111,391 27
	Per mile - -	3,252 29
Total estimate from Charleston to Darwin - - - - - - - - -		118,656 27
	Per mile - -	3,325 56

The expense of a rubble-stone causeway for the turnpike I have omitted to estimate, as time did not allow the requisite examinations to be made in order to determine where suitable rock could be obtained. Limestone "in place" was found on Embarrass river and the forks of Mill creek, also between Marshall, Darwin, and Aurora; and undoubtedly there are many other places near the line where the necesrary rubble can be had, which would enable a causeway to be constructed at a reasonable expense.

Respectfully, yours,

ARTHUR W. HOYT.

Engineer of the E. E. District.

RAILROAD—DES MOINES RAPIDS.

January 12, 1839.
Read, and concurred in.

Mr. Smith of Wabash, from the Committee on Internal Improvements, made the following

REPORT:

The Committee on Internal Improvements, to which was referred a resolution instructing them to inquire into the expediency of constructing a railroad from the head of the Des Moines rapids to the intersection of the Peoria and Warsaw railroad, report:

That they have had the subject under their consideration; and upon the investigation of the probable amount of business which would be done upon the proposed improvement, and the public accommodation to result from its construction, its importance cannot be questioned. The Des Moines rapids, for several months in the year, present a very formidable barrier to the navigation, and render a portage round them, for the immense trade of the river, indispensably necessary. As the trade on the river must rapidly increase with the settlement of the country drained by this great river and its tributaries, it cannot be expected that this important portage will continue long to be overcome in the expensive manner it now is, but that the public convenience will demand a railroad or canal either in Illinois or Iowa.

The committee, however, are unwilling, notwithstanding the great importance of this work, to recommend its construction by the State at present; but they will express their belief that it is one of numerous cases, in which the concentration of individual capital may very properly be authorized by the Legislature to effect the object, reserving to the State the privilege of purchasing the improvement, whenever, in the opinion of the Legislature, the public good requires it to be done. The work does not, in any manner, conflict with the State works, but on the contrary is calculated to throw trade on the latter.

They therefore ask to be discharged from the further consideration of the subject so far as it is proposed to construct the work by the State.

REPORT

OF

THE SELECT COMMITTEE

ON THE

PROPOSED CHANGE OF THE SOUTHERN TERMINATION

OF

THE CENTRAL RAILROAD;

SUBMITTED

TO THE HOUSE OF REPRESENTATIVES,

JANUARY 28, 1839.

VANDALIA:
William Walters, Public Printer.
1839.

SOUTHERN TERMINATION OF THE CENTRAL RAILROAD.

JANUARY 28, 1839.

Read, and laid on the table.

Mr. COPLAND, from the select committee to which the subject had been referred, made the following

REPORT:

The select committee to which was referred the petition of sundry inhabitants of this State, praying for an alteration in the southern termination of the Central railroad, and for a re-examination and location of a route for the same, beg leave to report:

That, in the opinion of this committee, the leading object of the system of internal improvements, as adopted by this State, was to increase the facilities for the transportation of all the products of the interior to such points on the navigable waters of the State as should afford either eligible marts for their sale and transfer, or proper facilities for forwarding them to their ultimate market. This system, the expense of which must be borne by all, should be carried out, honestly and faithfully, for the benefit of all so as to give, at the least expense, the greatest amount of public accommodation; and so as to place, as nearly as practicable, the producers in the interior on an equal footing with those bordering upon navigable waters.

In this system the Central railroad is first in importance. It commences within a few miles of the northern boundary of the State, where the severity of the winter months obstructs all the natural avenues to market, and terminates, at its extreme southern border, in a latitude so mild as to leave all commercial facilities, at all times, in vigorous and uninterrupted action.

From the commencement of this road, at Galena, to the town of Vandalia, its route conforms to the existing interests of the country; and, without regard to cheapness of construction or directness of line, it is made to turn aside to accommodate established local centres of trade and intercourse. From Vandalia to the site of the city of Cairo, near the confluence of the Ohio and Mississippi rivers, no intermediate point is designated by law; and, by the requirements of the internal improvement act, the road is directed to be constructed on the most direct and eligible route between those two points. This line, if a direct one, would pass eight miles west of Salem, in Marion county; eleven west of Mount Vernon, in Jefferson county; twelve west of Frankfort, in Franklin county; and eleven west of Vienna, in Johnson county. All these towns are seats

of justice for their respective counties, and these counties form a central tier, dividing the State, east and west of them, into two equal parts, having an equal extent of territory, and an equal number of counties on either side.

It has been before remarked that, on all other parts of this road, and on all other lines of road within this State, material deviations from a straight line are directed to be made, with the view of accommodating the improvements of the country, to the established centres of population and business within the interior. In pursuance of this principle, the Alton and Mount Carmel railroad, in the section of country now under consideration, is made to deviate, many miles, from the most direct and eligible route, in order to reach the towns of Albion, Fairfield, and Carlyle; and the Shawneetown and Alton road is diverted from twelve to fifteen miles from its true course, for the sole purpose of reaching Pinckneyville, the seat of justice for Perry county. In declining, then, to fix intermediate points for the Central railroad, between its southern termination and the town of Vandalia, it is presumed the Legislature believed a direct and eligible route between those points could be had; otherwise, it is not believed by this committee that a departure from the principles adopted on all other routes, doing manifest injustice to a large portion of the State, would have been sanctioned. Whether such a route can be obtained, or not, this committee has no sufficient means of ascertaining, as no survey has been made of a line at all approximating to a direct one; but your committee has ascertained that the line of road, as at present located, is very circuitous, and deviates further from a direct one than either of the intermediate points referred to.

Between these two routes, there are some points of comparison deserving attention. The line, as located, approaches the town of Jonesboro, in Union county; where, after traversing the country for more than thirty-three miles from its southern termination, it is only ten miles east of the Mississippi and more than forty west of the Ohio; while the town of Vienna, in Johnson county, (a point in the proposed line nearly opposite,) is but two miles east of midway between these two rivers; and the town of Frankfort, in Franklin county, (also a point in the proposed line,) exactly divides the distance between them; while the located line opposite the town of Brownsville, in Jackson county, is less than twenty-four miles from the Mississippi, and more than sixty from the Ohio; and, for twenty miles, the route of the located line is but a few miles east of, and nearly parallel, to that part of the Shawneetown and Alton railroad between the towns of Pinckneyville and Nashville.

Under these circumstances, your committee cannot perceive any sufficient reason why such intermediate towns, between Vandalia and the point of termination of the Central railroad, as can be reached without serious injury to the capacity of the road, or materially increasing its length, should not be subject to the general principles of the system, and be made points in the route of this improvement; more especially are they unable to see sufficient grounds to justify their exclusion, without examination and survey, by the adoption of a line more indirect and less central than the one under consideration. They are, also, unable to appreciate a policy by which the State shall expend the resources of the whole people

in the construction of an improvement which, for more than one hundred and fifty miles, by circuitous and winding ways, avoids all the established points of intercourse of the country, reaches no town, and connects with no depots of trade and business—when, by a line nearly direct, it would assume a central position, and pass through and connect the seats of justice and commercial centres of four important counties.

The attention of your committe has also been given, with particular care, to the section of country in which the road is, by the present law, to terminate. They find that the whole country at the confluence of the Ohio and Mississippi, and for several miles above, is composed of an alluvial deposite from the waters of these streams, and, of necessity, easily affected by their action; and that, on the Mississippi side, the violence of that stream is making daily and rapid encroachments upon all points left unprotected by timber. The danger from this source is so great as to cause the engineer of the road to express, in his report, the apprehension that its ravages will extend to the embankments of the road. In addition to this, the whole country south of the mouth of Cache river is overflowed, annually, from river to river. The height of these floods is various, sometimes covering the highest ground but two or three feet, but occasionally to the depth of eight and ten feet.

In determining the capabilities of this section for either the termination of a railroad or a site for a town, there is neither security nor prudence in any views based upon an average height of waters. The maximum known height should be the governing consideration; and your committee accordingly find that the engineer who had the determination of the proper elevation of the road has prudently fixed it from ten to twelve feet above the natural surface of the ground at its terminus; and which, he says, is the most elevated point for the termination of the road within the site of the city of Cairo. But this elevation, though necessary for security, involves an inconvenience in its use, which will cost the State, in the arrangement of its depots and landings, an immense amount of money to remedy; and which will place the business of the road entirely beyond the ordinary means of individual enterprise.

In selecting the proper point for the southern termination of this improvement, regard should be had to the following considerations:

1st. That it should be accessible at all seasons of the year, and at all stages of water, to all classes of boats that are capable of reaching the mouth of the Ohio.

2d. That the geological formation of the country should be such as to insure the strongest probability that it will not be subject to considerable change from ordinary causes; and that its surface should be so elevated as to be at least above ordinary high water, or be capable of being conveniently and economically made so by artificial means.

3d. That the surface of the road should nearly coincide with the surface of the ground; and that it should be of easy access, and capable of being connected with, by individuals, by depots and ware-houses, at moderate cost.

4th. That the grounds adjacent to the termination of the road, and the country in its immediate vicinity, should have as few natural obstacles in the way of its speedy and economical settlement and improvement as possible.

Your committee are are of the opinion that the site selected for the termination of this road is deficient in most of these requisites; and that further examination should be had, for the purpose of ascertaining whether some point on the Ohio river, between its mouth and the Grand Chain, where the first obstructions in that river commence, cannot be selected presenting greater advantages than the present point of termination. Your committee would not express this opinion did they not believe that such examination would clearly prove that points do exist on the Ohio, between the Grand Chain and the present termination of the road, that possess every requisite enumerated by them for a commercial depot; and by the adoption of which, at least six miles of embankment, varying from eight feet to more than twenty in height, and exposed to the ravages of the river floods, together with an expensive bridge over Cache river, will be avoided; and that the completion of the improvement will be expedited, and a very large amount of money saved to the State.

It appears, from the report of the Commissioner of the third judicial district, that the amount of money expended upon the Central railroad, within that district, was, at the time of making that report, less than forty thousand dollars. This sum though large in itself, is of trifling importance when compared with the additional accommodation given, by the proposed change, to an extensive section of the State; and is altogether of no consideration when contrasted with the diminished cost and increased advantages of a proper termination of the road.

The confidence of your committee in the views here presented is strengthened by the opinions of the Board of Commissioners of Public Works, as expressed in their recent report to this body; in which they say that "it is believed that, in every instance, the lines may be improved, locations changed, and improvements made in the construction, that may lessen the cost" of the works.

Your committe, in conclusion, report that, in their opinion, the prayer of the petitioners is just and reasonable; and beg leave to introduce a bill directing a resurvey and location of all that part of the Central railroad south of Vandalia.

J. COPLAND, *Chairman.*

REPORT OF THE MINORITY.

JANUARY 28, 1839.

Read, and laid on the table.

Mr. MURPHY, from the minority of the select committee to which the subject had been referred, made the following

REPORT:

The minority of the select committee to which was referred the petition of certain inhabitants of this State praying for an alteration in the southern termination of the Central railroad, and for a re-examination and location of a route for the same, report:

That the undersigned does not subscribe to the doctrine, industriously sought to be propagated by interested individuals, that great and important public works, determined on by one Legislature, should be subject to be changed by a succeeding one, except under circumstances of imperious necessity. The undersigned will, in all cases, require that proposed changes in any general law should be proved, beyond the possibility of cavil or doubt, to be decidedly more beneficial than one solemnly enacted, under which (and the faith of the State pledged therein) investments of capital may have been made to a large amount; and a change in which might eventuate in great individual loss and embarrassment. It is a high and important object in legislation to preserve the national faith, and to redeem, to the letter, all promises expressed or implied in the law itself. This, as a principle of legislative action, is far more worthy of preservation than the treasures of a nation. The principle is the same in individual transactions; and he who shall violate it, to promote any end, is sure to meet with the scorn and contempt of every honorable mind. Of all the passions which exercise the greatest sway over man, self-interest is probably the strongest, the most easily excited, the most insatiable, and the promptings of which should be watched with the greatest jealousy. They who are actuated by it cannot make up an unbiassed decision upon the matter in issue; nor can a mass of persons, however respectable they may be, having strong local interests—which is but an expansion of self interest—become a competent tribunal to decide upon the propriety, or the contrary, of a public measure materially affecting those interests. Whatever representations persons thus situated may make should be received with many grains of allowance; and the public good would always require that they should receive a strict and searching examination.

The undersigned is led to these remarks from the fact that the petitioners who have thus sought to disturb a system which has received the sanction of our predecessors, and of the people generally, from their *location*, must be presumed to have personal interests which they believe will be promoted by the changes prayed for—otherwise, it is not to be supposed that they would make the effort. So far as they are directly concerned, the undersigned believes that they have no right to demand of the State any change in a system which is not *local* in its character, and in the harmony and advantages of which the whole State has a great and abiding interest. He does not believe that the citizens of any one of the counties petitioning have such an interest in a system co-extensive with the entire State as to justify any change for their exclusive advantage and convenience. In all similar cases, it would be just to require that it should be demonstrated that a proposed change was demanded by great public considerations affecting the interests of the whole State, and not those small local interests only of a very inconsiderable part of it. The undersigned does not doubt that petitions could be obtained, and numerously signed, to change any given part of every railroad embraced in our system, notwithstanding experienced and competent engineers, sworn to discharge their duties honestly and faithfully, should determine, with reference to the great interests of the whole State, against its propriety.

Although the most respectful attention should at all times be given to the requests of our citizens conveyed in the form of a petition or otherwise, no matter, numerically regarded, how inconsiderable they may be; still, when legislative action is desired, and great and important changes are insisted on by them, in any law of a general nature, it is then the duty of the Legislature to look beyond the citizens petitioning, and comprehend within the scope of their vision the interest of the great mass, and deliberate long and carefully how the change may affect that mass. The greatest good of the greatest number is especially to be regarded. The rights of individuals also, who may have undertaken enterprises, and expended money in faith of an existing law, and under its promises and inducements, should experience the protecting care of a just Legislature; and, if finally required to yield for the public good, the case must be strong and palpable in which the surrender will be demanded.

These considerations led the undersigned to a particular examination of the objects sought to be attained by the petitioners—the points of difference between him and the majority of the committee, with whom he regrets to differ—and how, in his opinion, the great interests of the State will be affected injuriously by granting their prayer.

It is known to all conversant with the proceedings of the last General Assembly, that there were many conflicting interests involved in the creation of the present system of internal improvements, all of which could not receive the favorable regard of that body. Some had to be passed over, others postponed, and some made prominent by receiving the most favorable regard of the Legislature after a full, fair, and impartial examination of them all.

Among the interests supposed to be the most concerned, were those existing on either side of the route of the Central railroad. A tier of

counties through which the petitioners now propose to pass this railroad—their centres lying from ten to fourteen miles east of the meridian—presented their claims through their attentive representatives; whilst the tier west of that line were equally zealous in asserting theirs to be the route most proper for the road to occupy. They were all heard—their claims duly considered, the great interests of the State at large consulted, and a determination made by law that this great artery of the system should commence at "Cairo city," and be constructed on the most direct and eligible route between that point and Vandalia. The site of Cairo city is in township seventeen south, range one, west of the third principal meridian; and Vandalia in township six north, range one, east of the same line; consequently, the most direct route would exhibit but little divergence either way from that line. The report of the Board of Public Works shows that an "eligible route" has been obtained between these points, the whole distance of which is 155 miles.

Having no data to determine accurately the length of the line as proposed to be located by the petitioners, the undersigned can only approximate to it from a general knowledge of the face of the country, which is hilly and occupied by many steep ridges and abrupt ravines, and the distances between the several towns specified in the petition, as determined by the map. From these items of information, he believes a line cannot be had to pass the points indicated, of a shorter length than 165 miles, making a difference in expense of at least $80,000, in distance alone; nor can the road be constructed at the same price, for the reason that the deep ravines and high ridges at the head of the South branch of Saline river, together with those at the heads of the several branches of Muddy river, would require a great outlay, if passed by a direct line; or, if carried by a circuitous route, the cost of construction would be equally enhanced. Besides all, by pursuing that route the most direct line, as required by law, is not obtained, Cairo city being nearly on the meridian, Vandalia two miles east of it, and Vienna, Frankfort, and Mount Vernon each fourteen miles east, and Salem about ten. It will be observed, also, that all the counties named in the petition are abundantly provided with facilities for transportation. Johnson, besides being washed by the Ohio, and having a coast on that stream throughout the whole extent of its southern border, has received from the State, for common roads and bridges, more than $5,000; Frankfort brought into immediate contact with that river by the Alton and Shawneetown road passing through it; Mount Vernon within twelve miles of the Central railroad as now located; and Marion penetrated by the Alton and Mount Carmel railroad, and by the Great Western mail route, both of which cross the Central railroad within twelve miles of Salem, its "commercial centre."

It was designed by the Legislature, upon a principle of compromise, that no points should be named between Vandalia and Cairo city, leaving it entirely to sworn engineers, under the direction of an honest public officer, to select the most direct and eligible route. This route has been selected; purchases, at high prices, for farms have been made upon it, with an eye to the increased advantages that would flow to them from the construction of the road; while, on the other hand, no investments

can have been made in either of the counties named, from the same consideration, the law nowhere encouraging the idea that a direct and eligible route would be changed for one less so. No inducements have been held forth, by law, to any one of their citizens, no promises made, no guaranties given that they should be any more benefitted by the system than is expressed in the law.

It is true, as asserted by the majority of the committee, that on other lines of road, and north of Vandalia on the Central road, points of divergence have been established by law. Would they consider it just that those points should now be changed for no other reason than that a rival point or antagonist interest desires it? Would not all who have relied upon the law fixing those points have just reason to complain of violated faith; and would not that reputation we have always enjoyed, even in the most disastrous times, for our high sense of honor, be justly tarnished? Do the majority of the committee believe that the owners of property at any one of the points indicated in the act establishing the internal improvement system, on the routes of the several roads, would consent to "*bird lines*" from one terminus to the other, or that they would have advocated and sustained the system, with such a provision in the law? They cannot, nor can the undersigned, believe it; nor can he perceive any difference in principle, so far as results are concerned, between making a direct line, as the Central road is south of Vandalia, a circuitous one, in the manner proposed by the petitioners, and making more direct other roads which have points of divergence established by law. Disappointment, disorder, a want of confidence, and great losses in either case would be the inevitable result. The State has already expended near $40,000, and made contracts binding on the State, according to the report of the Commissioner of the third judicial circuit, (which the undersigned has been permitted to examine,) amounting to $237,794, or thereabouts, for work doing and to be done at Cairo city, and on the first twenty-three miles of road. These sums amount, in the aggregate, to $277,794. The same report informs the undersigned that a large force has been employed during the summer and fall, and is now employed, in performing the work on that part of the road, much to the satisfaction of the Commissioner and engineers, and is prosecuting it with all fidelity and despatch under efficient contractors. These persons have acquired a right to their contracts amounting to the aggregate sum above stated, and could justly complain of the State for any violation of them. It is not to be supposed, with a knowledge of these facts, that a Legislature, actuated by principles of justice, would do any act which would give to any of its citizens occasion to complain of it as having violated their rights and destroyed contracts entered into in good faith, and in a rapid course of completion. Further than this, the Commissioner, as appears by the same report, has obtained, on favorable terms, ten acres of land in the city tract for a depot for State use, the title to which is vested in the State. This land the undersigned believes, if the designs of the company who own the city shall be carried into effect, as declared in their prospectus lately published in the "State Register," will, in the opinion of the undersigned, be worth to the State, at a reasonable estimate, $200,000. This will also be lost should the State abandon their pledge. But the

majority of the committee insist that the site selected is not a proper one for a commercial mart. If so, then the land there owned by the State will be worth nothing. They quote a part of the report of the engineer of the road, expressing his apprehension that the ravages of the Mississippi will extend to the embankments of the road. The undersigned will refer to other parts of the same report on this subject. He says: "The law having confined the point of starting at Cairo city, there was but little range in the selection of a site for the depot. Several causes operated in the selection of the present site. Its position is on the Ohio river, about three-fourths of a mile above its mouth. The river bank at this point is the highest of any throughout the extent of the city front. Its vicinity to the mouth will diminish materially the inconvenience in touching at the port for vessels engaged in the Mississippi trade; whilst the gentleness of the current, and the unvarying depth of the water, at once makes it as good a harbor as can be desired. The Mississippi, on the contrary, from its impetuosity and the variableness of its channel, renders the permanency of a good harbor and landing very uncertain. It will, however, be a matter of future consideration whether a depot and landing place should not be constructed on the Mississippi bank, to be used when the stage of water will permit.

"The reiteration of statements extremely disadvantageous to the position of the point required by law to be selected for this depot—vague and uncertain to some extent as they are, and originating perhaps in antagonistical interest—although discredited by me, has had the effect to cause a very careful examination of the whole point. The result has been a thorough conviction that the State incurs no risk in completing her works. The earth is firm and dry, and fully capable of sustaining the weight of any mass of buildings which could be crowded thereon. During the highest water, there is very little current out of the channel of the river; and as the grade line is established at such elevation that it cannot be overtopped, there is no danger to be apprehended of the destruction of the embankment. There is but one source of danger—it is from the ravages of the Mississippi upon its banks, threatening to extend its inroads as far as the embankments. That the bank has wasted to some extent is certain, but the river now shows a disposition to remain stationary; and this, in that river, is generally followed by recession. In the event, however, of the wasting continuing, I am assured by Mr. D. B. Holbrook, the person most concerned in Cairo city, that immediate steps will be taken to curb it; and the successful result of proper measures to effect this will not admit of doubt."

The same engineer, further on in his report, uses this language: "The termination of the Central railroad is the most remarkable point in the west. It is undeniably the head of low-water navigation for vessels of large size. A series of shoals or bars commencing at Cache island, and extending at short intervals entirely up the Ohio river, prevents its navigation for long periods, at a time when the growing commerce of the west requires it should be in the best order. This, in future, will cause a selection of that route for transportation which can be confided in. The Mississippi always supplies that route to the mouth of the Ohio; and from thence advantage can be taken of our internal improvements for conveyance

to the interior, or the smaller boats can freight from thence for the upper rivers. The present situation of our commerce is too plainly seen, and too sensibly felt, to again admit of confidence in the Ohio and Mississippi rivers above their confluence. For the shipment of produce, this place has the advantage of any point above. The river below is seldom obstructed, when all the rivers above are too low for navigation, or blocked up with ice. From all these advantages, the interest is apparent which the State has in the proper ordering of this important point."

The undersigned has extracted largely from the report of the chief engineer, for the purpose of destroying any erroneous impressions that may have been received from other quarters in regard to the importance of this site. He trusts that his opinions will be satisfactory and conclusive. In addition to them, the undersigned has seen and read the concluding remarks of other engineers employed to examine and report upon the capabilities of this same site for improvement. These engineers are the celebrated William Strickland and Richard C. Wright, of Pennsylvania. They say: "In conclusion, we cannot refrain or withhold our surprise that any doubts should have been entertained, or acted upon, with reference to the practicability of erecting a city at the confluence of these great navigable rivers. Topographically considered, the site is nearly in the centre of the United States. The texture and solidity of the banks at the point are as firm and secure as any other positions for building, between it and the rocky formations higher up the streams. It is the very threshold of the most fertile regions of the west, surrounded by the best timber and bituminous coal; and from the construction of the great Central railroad, and the immense range of navigable rivers all centring at this point, it must, necessarily, have the exclusive advantage of becoming the great *entrepot* of all the agricultural and mineral wealth of this great empire of industry and enterprise. In short, there is not in any quarter of the globe a situation so commanding, and replete with every kind of produce and material, to promote the prosperity of the merchant, the skill of the mechanic, and the growth of a great city."

These are the unbiassed opinions of distinguished and disinterested men, on which the undersigned reposes with confidence. He cannot, with all the light he has been enabled to obtain, believe that the interest of the State would, in any one particular, be promoted by granting the prayer of the petitioners.

The undersigned would not consider he had discharged the duties his situation imposes upon him, did he close this report without adverting to other topics having a direct and important bearing, upon the pecuniary interests of the State, as connected with this subject.

In addition to the fact that contractors who have made engagements with the State will, in the event of any change being made, sue for and recover damages, great delay and expense will be caused in the prosecution of the works, as the laborers already collected will disperse to seek employment elsewhere. Six months, or nine, will be consumed in making surveys, attended with all the heavy expenses incident to that branch of the service; to which may be added the increased expense of letting new contracts, which are by no means light or inconsiderable.

On the route as now located the right of way has already been obtained, on the most favorable terms to the State, with the express understanding that the road should pass over the land released; in faith of which the timber has been cut off, excavations made, and other destruction of property to a great amount, which must be made up to the owners, if the route is abandoned, in money. The State has also purchased a considerable quanty of land on the present line, which is daily increasing in value, not only suitable for town sites, stations, and depots, but which contains beneath its surface inexhaustible beds of the best coal, building and limestone, convenient to the road, and which must become lucrative articles of commerce; the value of all which, by any change, will be materially lessened.

All of which is respectfully submitted.

R. G. MURPHY, *of said committee.*

LETTER

OF THE

PRESIDENT OF THE BOARD OF PUBLIC WORKS,

TRANSMITTING

Information relative to the abutments for the viaduct across the Kaskaskia river, for the Central railroad, near Vandalia.

January 29, 1839.

Read, and referred to the Committee on Internal Improvements.

Internal Improvement Office,
Vandalia, January 28, 1839.

To the Hon. the Senate
of the State of Illinois:

The Board of Public Works, in answer to a resolution addressed to the Commissioner of the second judicial circuit, asking for information in relation to the abutments of the viaduct across the Kaskaskia river, for the Central railroad near Vandalia, beg leave to report:

That it is impossible to give an exact description of structures that as yet are not made; and in relation to these or any other abutments, much depends upon the foundation that may be found when a final examination is made; consequently the depth and width of the foundation, the batter of the walls, the length, height, and depth of the wings, and many other portions of said work must necessarily be uncertain until all those facts are ascertained. As that is not, as yet, done in relation to those abutments, an accurate description of the intended work cannot now be given. As to the inquiry, whether it is to be constructed of brick, the Board would report that it is the intention to make said abutments out of the best materials, at the same time studying economy and durability. With this view, a stone foundation for said piers, raised a sufficient height to be safe and durable, with the upper part of brick, has been adopted; and the Board know of no good reason why brick should not be used, if the same can be done to the advantage of the State.

This material for those piers has been recommended by the engineer upon the work, as will be seen by reference to his report, found at page one hundred and thirty-eight of the report of the Board; and it is believed that in many instances brick may be obtained that will be cheaper, and in some instances much more durable than the rock, if in the immediate vicinity. Rock cannot be obtained within twelve or thirteen miles of this viaduct; consequently cannot be got upon the gound without great cost and expense, that, in the opinion of the Board, the objects at present would not justify.

All of which is respectfully submitted.

Signed by order of the Board.

WILLIAM KINNEY,
President of the Board.

WILLIAM PRENTISS,
Secretary B. P. W.

LETTER

OF THE

PRESIDENT OF THE BOARD OF PUBLIC WORKS,

TRANSMITTING

Information relative to the Bloomington, Mackinaw, Peoria and Pekin railroad.

January 29, 1839.

Read, and laid on the table.

Internal Improvement Office,
Vandalia, January 28, 1839.

To the Hon. the Senate
of the State of Illinois:

The Board of Public Works, in answer to the resolution of the Senate of the State of Illinois, calling for information in relation to the Bloomington, Mackinaw, Peoria and Pekin railroad, beg leave to report:

That the course heretofore adopted by the Board has been to distribute the expenditure of money and divide the work to be done as economically as possible, between the different roads, and in the different parts of the State, so as not to give any one work or any separate portion of the State an advantage over another.

In making this distribution it was found that nine miles would be all that in justice could be awarded to the road in question. In distributing those works the Board has also sought to locate them so as to be most useful to the inhabitants, and where they would soonest yield a profit. It is also a provision of law, that the construction of those works shall commence at the navigable streams; consequently this work was to commence upon the Illinois river, either at Pekin or opposite Peoria. If the work should commence at Pekin, the contracts could reach Tremont, a considerable trading town and the county seat of Tazewell county, and there form a communication between two places of some business; but if it commenced opposite Peoria, and extended nine miles in the direction of the town of Mackinaw, the work would terminate at some point in the prairie, where it would be neither useful nor profitable unless extended further.

Under those circumstances it was thought advisable to adopt that portion of the work between Pekin and Tremont. There is another circumstance which operated in some degree upon the minds of the Commissioners in relation to this portion of the work. It is known to your body that the diverging point for the two branches of this road, in its progress from Bloominton to the Illinois river, is at Mackinaw town.

This town is situated upon a considerable elevation upon the east side of the Mackinaw river; consequently to diverge at that town would be to construct two costly viaducts over this stream, when one could be made to answer all purposes for both branches. Again, it was found almost impracticable to cross this river immediately at the town. This is principally owing to the great elevation, the depth of the valley of the river immediately opposite, and the broken and undulating surface of the country immediately upon the west side of said stream; consequently a route has been adopted for the Pekin branch, some miles down the river from Mackinaw town—and one much more favorable than any other point yet discovered. Under all these embarrassing circumstances, and as no useful effect could be attained by commencing said road before the meeting of the General Assembly, the survey has only been made with a view that those defects might be remedied, if it should be deemed advisable. This accounts for the reason why no part of said branch has, as yet, been put under contract.

While upon the subject of this branch, it may not be improper to mention that much difficulty has been encountered in finding a suitable route, and great cost will be necessary to raise the Illinois bluff opposite to Peoria; and after the same arrives at the summit, its course lies diagonally across the farms and lands of the inhabitants of the country. All those defects could be in a great degree remedied, the road rendered equally useful as a branch to Peoria, and much money saved to the State, if the point of intersection was left open, and the branch directed to be located upon the cheapest and best route for the interest of the State.

As to the inquiry, whether any part of the ten miles ordered to be put under contract upon that road is intended for that branch, the Board would report that a portion of said work is intended for that branch; but as it was not certain whether any changes would be made by law in the location of this road, the particular location of said work upon said branch has not been as yet designated; but it is the intention of the Board to go on with said branch, and give to it a fair proportion of the appropriation as the works progress, whether any changes shall be effected or not.

All of which is respectfully submitted.

Signed by order of the Board.

WILLIAM KINNEY,

President of the Board.

LETTER

FROM

THE PRESIDENT

OF THE

BOARD OF COMMISSIONERS OF PUBLIC WORKS

OF

THE STATE OF ILLINOIS,

RELATIVE TO

NORTHERN END OF THE CENTRAL RAILROAD

SUBMITTED TO

THE HOUSE OF REPRESENTATIVES,

JANUARY 30, 1839.

VANDALIA, ILL.
William Walters, Public Printer.
1839.

REPORT

OF

THE BOARD OF PUBLIC WORKS.

JANUARY 30, 1839.

Read, laid on the table, and ordered to be printed.

INTERNAL IMPROVEMENT OFFICE,

Vandalia, January 29, 1839.

To the Hon. the SPEAKER *of the House of Representatives:*

SIR: In accordance with a certain resolution adopted by the House of Representatives on the 14th inst., calling on the Board of Commissioners of Public Works for information relative to the prosecution of the work on the northern end of the Central railroad; and, in answer to the first inquiry, to wit: "Such communications (if any) as may have passed between the citizens of Galena, assembled in town meeting, and the Board of Public Works, relative to the northern termination of the Central railroad; and, also, from the trustees of the town of Galena to the Board of Public Works, on the same subject, or to the Commissioner of the sixth judicial circuit:" the Board have the honor to submit the following communication, marked A, as comprising all the communications that have passed between the citizens of Galena, assembled in town meetings, and the Board of Public Works, relative to the northern termination of the Central railroad; and the following communication, marked B, on the same subject, comprises the correspondence from the trustees of the town of Galena with the Board of Public Works.

In answer to the second inquiry: "Whether the northern termination of the Central railroad has yet been located; and, if so, whether such termination is north or south of Fever river:" the Board have to state that they have had the subject under mature deliberation, and given it a thorough examination, and find that the Commissioner of the sixth judicial circuit has not made any decision on the subject; and he thinks the subject of sufficient importance to require legislative action, and expressed his desire that it should be referred to the Legislature.

They have also had before them a letter from Col. J. W. Stephenson, late Commissioner of said circuit, a copy of which is herewith annexed, marked C; by which it will be seen that no definite action had been taken by him on the subject; and the Board, so far from having made any decision whatever in regard to it, most cheerfully concur with the present Commissioner of the sixth judicial circuit in the opinion that it is a fit subject for legislative action.

In answer to the third inquiry: "At what place on Rock river the said Board of Public Works have determined that the Central railroad shall cross, and their reasons why a more direct route from Peru, on the Illinois river, to Savannah, on the Mississippi river, has not been adopted:" the Board have to state, that they have not yet determined where the Central railroad shall cross Rock river, the line not having been definitively located from Rocky ford, or inlet, to Savannah.

In answer to the fourth inquiry: "What amount of money will be required to improve the rapids of Rock river, in range 7, east of the 4th principal meridian; and, also, what amount of water-power will be obtained by said improvement:" the Board refer the House of Representatives to the report of O. Blane, senior assistant engineer of the Rock river improvement, appended to the report of the Commissioner of the sixth judicial circuit, which was laid before the House of Representatives by the Governor, on the 27th December, 1838.

In answer to the fifth inquiry: "Whether this water-power would not be brought into more immediate use, and rendered more valuable to the State, if the Central railroad should cross Rock river at that point:" the Board are unable to answer, not having in their possession a report from the engineer on the subject. But, in order to furnish all information desired, thay have transmitted a copy of that portion of the resolution relative to this matter to the engineer in charge of said improvement, with instructions to report on the same at as early a period as practicable; and, on receipt of said report, the Board will furnish the House with the information desired.

In answer to the sixth inquiry: "Whether the line of the Central railroad adopted is longer or shorter than another line from Peru, on the Illinois river, via the rapids on Rock river, to Savannah, on the Mississippi river, and the comparative cost of construction of the two routes:" the Board have to state that there has not been any line adopted by the Board; but, in order to afford the House of Representatives every information on the subject, the Board refer them to the annexed report of Wm. B. Gilbert, marked D.

In answer to the seventh inquiry: "And that they report to this House their reasons for leaving an interval of ten or twelve miles between that part of the Central railroad already put under contract from Galena south, and that part proposed by the Board of Public Works to be put under contract during the ensuing six months, east from Savannah towards Rock river:" the Board have to report that, in making their decision, they had in view the 25th section of the internal improvement law; by which it will be seen that they are required to commence at the navigable streams, &c. If, however, in the wisdom of the Legislature, it should be found more conducive to the public interest to proceed in a continuous line, the change could be made without in the least affecting or producing any disconcert whatever in the arrangement of the Board.

Respectfully,
Your obedient servant,
WILLIAM KINNEY,
President B. P. W.

WILLIAM PRENTISS,
Secretary B. P. W.

A.

MAY 24, 1838.

At a meeting of the citizens of Galena, convened at the court-house the 24th of May, 1838, Elijah Charles, Esq. was called to the chair, and Reuben W. Brush appointed secretary. The following resolutions were adopted:

Resolved, That a committee of five be appointed to enter into a cor respondence with Col. J. W. Stephenson, acting Commissioner of Public Works for the sixth judicial circuit, to ascertain from him what has been and will be done in relation to the northern termination of the Central railroad, and to report at a subsequent meeting of the citizens.

The following named gentlemen were appointed by the chair, that committee: John Stark, T. Drummond, Chas. S. Hempstead, R. W. Carson, J. Wyeth.

Resolved, That said committee transmit to said Commissioner a copy of the proceedings of a meeting of the citizens of Galena, held on the 17th inst., on this subject, and request from him an answer expressive of his views therein. And then the meeting adjourned till Monday, at 5 o'clock, P. M.

ELIJAH CHARLES, *Chairman.*

REUBEN W. BRUSH, *Secretary.*

MAY 28, 1838.

The committee appointed on the 24th inst. under the following resolution:

"*Resolved*, That a committee of five be appointed to enter into a correspondence with Col. J. W. Stephenson, acting Commissioner of Public Works for the sixth judicial circuit, to ascertain from him what has been done and what will be done, in relation to the northern termination of the Central railroad, and to report to a subsequent meeting of the citizens,"—beg leave to submit the following report:

That on Friday afternoon, 25th inst., they sent a letter to Col. Jas. W. Stephenson, acting Commissioner for this circuit, a copy of which is herunto annexed, but have not received any reply thereto.

JOHN STARK,
T. DRUMMOND,
C. S. HEMPSTEAD,
R. W. CARSON,
J. WYETH.

GALENA, *May* 25, 1838.

To Col. JAS. W. STEPHENSON,
Acting Commissioner of Board Public Works for Sixth Circuit.

SIR: At a meeting of the citizens of Galena held yesterday, a copy of the proceedings of which are here enclosed, the undersigned were appointed a committee to correspond with the Commissioner for this circuit upon matters expressed in the copy of the proceedings.

They were also directed to furnish the Commissioner with a copy of the proceedings of a meeting held on the 17th inst., and which is also here enclosed.

The committee deem it due both to the inhabitants of Galena and to the Commissioner, to endeavor to disclose, as fully as possible, the state of public feeling and sentiment upon the subject of the termination of the Central railroad; and the committee will not believe, for one moment, that the wishes and opinions of the community, when once understood, will be disregarded, however widely the citizens and the Commissioner may differ in the construction of the law.

An impression prevails in the minds of the citizens, that the line of the railroad has been laid out so that the termination must of necessity be on the eastern bank of Fever river, and that it is not intended that the road shall cross the river.

Whether this impression be correct or not, the committee have no means of positively knowing, having never seen any official statement or admission of the fact.

But the impression, whether correct or not, has called forth a decided and almost unanimous declaration of opinion from the citizens, that they consider that to locate the termination of the railroad on the eastern side of Fever river, would be highly injurious to their interests.

A large majority of the citizens, among whom are the members of this committee, do not think that the law has even left it optional with the Commissioners to terminate the railroad on either side of the river. They think that the law makes it obligatory on them to terminate it on the west side.

The committee do not propose to argue the question at this time; they only wish to state facts as to the opinions and sentiments of the public.

Upon this branch of the subject, it only remains to state that, in case the impression above alluded to be correct, it is the expressed wish of at least nineteen-twentieths of the inhabitants of Galena, that a resurvey be made, or other measures taken to locate the termination of the road at the west side of Fever river.

The committee beg leave most respectfully to inquire of the Commissioner what has already been done under authority of the Internal Improvement law, and what will be done in relation to the northern termination of the Central railroad; and, in further pursuance of their instructions from the meeting, they have to request the Commissioner to favor them with an expression of his views upon the proceedings of the seventeenth instant.

With sentiments of respect,

Your friends and obedient servants,

JOHN STARK,
T. DRUMMOND,
C. S. HEMPSTEAD,
R. W. CARSON,
J. WYETH.

B.

TRUSTEES' OEFICE, GALENA, *May* 28, 1838.

Whereas, in the opinion of this Board, the present location of the northern termination of the Central railroad on the east side of Fever river is a measure hostile to the interests of this town, and in violation of law:

Now, therefore, we the trustees, in town council convened, do hereby protest against the present location of the said northern termination, and request the Board of Public Works to order a re-survey of the line to Galena, in such a way as fully to redress the grievance. This protest to be forwarded to the Board of Public Works, under the seal of the corporation.

In testimony whereof, we have hereunto set our names, this
[L. S.] 28th May, 1838, and caused the seal of the corporation to be hereunto affixed.

DAN. WANN, *Pres't P. T.*
H. H. GEAR,
JOHN DOWLING,
JOHN L. SLAYMAKER,
DUDLEY SIMMONS,
D. B. MOREHOUSE.

Attest: W. B. GREEN, *Cl'k.*

MAY 28, 1838.

The meeting of the citizens convened on the 24th inst. for the purpose of taking into consideration the termination of the Central railroad, and adjourned to this day, met agreeable to adjournment; Elijah Charles, Esq. in the chair, and R. W. Brush, secretary.

The proceedings of the former meeting were read, and the committee appointed under a resolution passed at said meeting made report that they had addressed a communication to Col. Jas. W. Stephenson, Commissioner of the Board of Public Works for the sixth judicial circuit, on the subject alluded to in said resolutions, but had received no answer. A copy of the communication was read by the charirman of said committee, and the report accepted.

The following resolutions were offered and adopted:

Resolved, That the proceedings of this meeting, and of former meetings on this subject, be published in the papers of Galena, and transmitted to the Board of Public Works at Vandalia, signed by the chairman and secretary.

Resolved, That a committee be appointed to address a communication, explanatory of the proceedings above alluded to, to the Commissioners of Public Works at Vandalia.

The following named gentlemen were appointed by the chair, that committee: Thomas Drummond, William Smith, and Daniel Wann.

Resolved, That the committee of correspondence appointed at the first meeting, whenever they shall receive an answer from the acting

Commissioner of the Board of Public Works for the sixth judicial circuit, on the subject of their communication of the 25th inst., cause the same to be published in the papers of Galena, and transmit a copy to the Board of Public Works at Vandalia.

Resolved, That the meeting adjourn sine die.

ELIJAH CHARLES, *Chairman.*

REUBEN W. BRUSH, *Secretary.*

GALENA, *May* 29, 1838.

To the BOARD OF COMMISSIONERS
of Public Works for the State of Illinois.

GENTLEMEN: At a very large meeting of the citizens of Galena held yesterday, the undersigned were appointed a committee to send a communication to your Board explanatory of certain proceedings which have taken place at various public meetings of the citizens, convened for the purpose of expressing their views in relation to the northern termination of the Central railroad; and, in compliance with the wishes of their fellow citizens, they now address you.

At the time of the passage of the act to establish and maintain a system of Internal Improvement, Feb. 27, 1837, the town of Galena was almost entirely situated on the west bank of Fever river, and so it still remains. It being understood that the acting Commissioner for this circuit had terminated the Central railroad on the east side of the river, at some considerable distance from the centre of business and population, it was proposed to call a public meeting in order to express the sentiments of the citizens upon the subject. The survey had been made, it was believed, and the road so terminated that it never could be, at any future time, brought across the river; and as it was supposed that a vast majority of the people of this town were of the opinion that the railroad ought to terminate on the west bank of Fever river; that the depot should be there established, and that the law contemplated that it *should* terminate on the west side of the river, the president and trustees of the town, on the 15th inst., requested a meeting of the citizens for the purpose of taking the subject into consideration. Accordingly, on the 17th instant, a meeting of the citizens took place in pursuance of the call of the trustees; at which meeting several resolutions were passed almost unanimously; and we herewith enclose to your Board a copy of the proceedings of that meeting.

The Board will observe that a preamble to the resolutions declares that the law contemplated that the road should terminate on the west bank of the river. We do not intend, at this time, to enter into a general argument to show that such is the true construction of the law. We will merely state that the acts of Congress laying off the town of Galena, and the proceedings of the commissioners appointed under the last of those acts—the limits of the town as defined and understood at the time of the passage of the Internal Improvement law—what took place before the committee on Internal Improvements when a proposition was introduced that the road should end on the east side of the river, and rejected—the position and situation of the town itself, then and now, all conclusively prove, to the satisfaction of the citizens of this town, that

it is the spirit and meaning of the law that the railroad should terminate on the west bank of the river.

We think also that it can easily be made to appear, not only that such is the proper construction of the law, but that it is for the best interests of the town and State now, and for all time to come, that the road should so terminate; but the undersigned have not time to enter into this branch of the subject, as it would lead them into too extensive a field of investigation. They would only refer to the various proceedings which have taken place at the public meetings, where those most acquainted with the matter, and therefore best capable of judging, have expressed their opinions.

A meeting of the citizens was subsequently convened on the 22d instant, with a view of taking measures to commemorate the commencement of the railroad, and a committee of arrangements was appointed, but, owing to some misunderstanding with the acting Commissioner, nothing was ever done; and they were discharged.

A meeting was also held on the 24th instant, a copy of the proceedings of which is herewith enclosed; at which meeting a committee was appointed to enter into a correspondence with Col. Stephenson, the acting Commissioner for this circuit. Accordingly that committee did address a letter to Col. Stephenson, a true copy of which we beg leave herewith to enclose. The letter was delivered to the Commissioner on the afternoon of the 25th instant. Agreeably to the adjournment of the meeting of the 24th, another meeting took place yesterday, the proceedings of which we also beg leave to enclose herewith. At yesterday's meeting the committee of correspondence reported that, up to that time, Col. Stephenson had given no reply to their communication; and up to this day no reply has yet been received by the committee. The Board will perceive the committee are directed to forward to you a copy of any answer which may be hereafter received from Col. Stephenson; which will of course be done.

At the meeting yesterday, a member of the committee of correspondence stated that he had had some conversation with Col. Stephenson, who informed him, and requested him to inform the meeting, that his engagements had been such that it had not been in his power to reply to the committee. But as it was uncertain whether the reply of the Commissioner would be received in season to be laid before your Board at its semi-annual meeting on the 4th of June next, it was considered advisable to transmit at once the proceedings of the various meetings of the citizens, together with an explanatory letter.

The undersigned have been requested also to forward to you a protest of the president and trustees of the town, against the termination of the road on the east side of the river, and several petitions to your Board, calling for a re-survey of the route; and they accordingly herewith enclose the papers referred to, and ask for them an attentive consideration, as they contain the signatures of a large portion of our most respectable citizens.

As an act of justice to Col. Stephenson, we deem it our duty to add, that it is a matter of great regret to us, that his health and his engagements have been such as to prevent him from making a full statement of all that has been done in relation to the termination of the railroad, as

we do not doubt that a letter from him to the committee of correspondence would explain many things in regard to which there is now much misapprehension among his fellow citizens. But it seems to be rendered certain that the Commissioner has determined that the road should terminate on the east bank of the river; and it is against this general conclusion of the Commissioner that the citizens of this town protest.

It is no exaggeration to say that the feeling which has been manifested and which now exists among our citizens, in relation to this subject, is intense. The people feel that they have been aggrieved by the decision of the acting Commissioner for this circuit; and they appeal to your Board for redress.

The simply ask justice; they request that respect should be paid to their rights; they do not approach your Board to crave favors; they are willing that the Commissioners should lay out and terminate the railroad with the law in their hands to guide and direct them in their operations. To this they think they may justly lay claim. To the law, fairly and liberally construed, they are willing to pay obedience, and they doubt not that the Commissioners will do the same. This is all that the people of Galena demand.

We ask from the Board a candid and respectful consideration of these sentiments and opinions thus frankly expressed. We do not present them as the result of temporary ebullitions of feeling, but a deep and settled conviction of the citizens of Galena.

On behalf of the citizens.

Very respectfully,
Your obedient servants,
T. DRUMMOND,
DANIEL WANN,
WM. SMITH,
Committee.

C.

To the Board of Public Works.

Gentlemen: The termination of the Central railroad *at Galena* seems, by the proceedings of the numerous late meetings of the citizens of Galena, to produce discontent and something of excitement.

Now, I will simply remark that they are premature in all their proceedings, in regard to this subject, inasmuch as I have no more knowledge of the point of termination than either of you have. In regard to another survey, I have proposed to give it to them. For further particulars I refer you to Mr. Gilbert. My belief is that the true interest of the town requires a *depot* on both sides of the river.

Very respectfully,
Your obedient servant,
JAMES W. STEPHENSON.

Galena, *May* 24, 1838.

Hon. William Kinney,
Chairman of the Board of Public Works of the State of Illinois.

Sir: A considerable excitement is created in this community, since it has become known that the acting Commissioner of the sixth judicial circuit has fixed upon the east side of Fever river for the termination of the railroad. A meeting of the citizens was held about ten days ago, for the purpose of taking the subject into consideration, and expressing their views thereon. The resolutions passed at that meeting afford evidence of their entire disapprobation, as you will perceive by the enclosed paper.

The inhabitants of Galena have supposed that so much deference at least would be paid to this expression of their views as to cause a suspension of the works on the first section; that a resurvey would be made of that section, with a view to passing the railroad to the west side by means of a bridge; and that the whole case would be submitted to the Board for their decision at the meeting to be held next Monday week.

Having been disappointed in this reasonable expectation, and unwilling "to chaunt their own requiem," they have determined to postpone, indefinitely, the contemplated celebration of breaking ground, for which preparations have been made as you will learn by the enclosed handbill.

Feeling, as I do, a deeep interest in whatever may operate on the welfare of Galena, from a long residence, extensive business, with a large amount of real estate within its bounds, and likewise in my capacity of a trustee of the town, I beg leave to lay my views on the subject before your honorable Board, believing that, on a full view of the case, they may be induced to pause and reflect before taking a definite action in so important a case.

And first. I consider the decision of the acting Commissioner to locate the terminus of the railroad on the *east side* of Fever river, *to be in*

direct contravention of the law; because, *at the time* of the enactment of the law, Galena was *not* on the east, but wholly on the *west* side of the river; and to this day, there is not over a dozen houses on that side.

Secondly. Because such location would be ruinous to the interests of the inhabitants. It would increase the obstructions on the river. It would greatly impede the navigation by steamboats, and often jeopardize the safety of passengers and freight in the ferry-boats; whilst the *extra* charges consequent on the deposite of goods in the depot, and transportation from thence to the merchants' store in Galena, would more than equal the price of transportation of those goods from Savannah, and the *drayage* to the store.

If this be true, why construct a railroad from Savannah to Galena? Why not terminate it at the former place?

Besides, it is a well known fact that nearly all our trade is derived from the west side of the river. There also are our mineral grounds, and our furnaces, our dwellings and improvements. Our territorial neighbors, too, will not willingly submit to the inconvenience and extra expense of transporting their lead by a *ferry* to the depot.

In view of the low grounds (subject to overflow, and at this time under water) on which the termination is fixed, and of all the circumstances of the case, it would be difficult to assign any valid reason for the decision of the acting Commissioner. On the contrary, it is believed that, had the survey been carried up four feet higher (with a view to cross the river opposite to Galena by a bridge) the road might have been made at considerable less expense, whilst the distance would have been shortened. There are commanding sites for bridges, both at the upper and lower ends of the town, and almost immediately on a line with a point fixed on for the termination. Stone is abundant on the spot; the bluffs on each side afford ready made foundations for abutments, and the distance across does not probably exceed 200 feet.

Besides, generally speaking, in the fall and in the spring, at the washing and breaking up of the ice, there is a week or ten days each, that the passage of the river by the ferry-boat is impracticable.

It is not to be disguised that there is a most decided opposition to the present location on the part of this whole community. They had welcomed the introduction into this State of the system of internal improvement, as a great public benefit, by means of the facilities it would afford of communication with distant parts of the State, and with other States. This decision has entirely blasted their hopes; and they will be forced, if persisted in, to consider this railroad as a curse, instead of a blessing.

There is another view of the subject, which I beg leave to present for consideration, namely, the importance of securing public favor towards the system of public improvements. If, in the construction of these roads, the public good is to be sacrificed to individual benefits; if they are to be located without due reference to the wants and convenience of the immediate community though which they may pass, and of the State generally, then will the people veto the whole system.

Permit me to request the favor of an answer, and to offer an assurance of great respect and consideration.

H. H. GEAR.

RAILROAD CELEBRATION.

The citizens of Galena and vicinity are respectfully invited to meet at the Court-house, on Monday morning next, at 9 o'clock, for the purpose of celebrating the breaking ground on the northern termination of the great Central railroad. The citizens of Dubuque, Mineral Point, and the adjoining counties, are also respectfully invited to join in the celebration under the following order of the committee of arrangement.

Order of Procession.

Music.
Marshal of the day.
President and Trustees of the town.
Clergy and Orator of the day.
Commissioners, Engineers and Contractors.
Second Marshal, { Laborers, with their implements. } Third Marshal.
Members of Mechanics' Institute.
Fire Companies.
Hook and Ladder Company.
Members of the Bar.
Citizens and Strangers.
President, Vice-President, and officers of the Chamber of Commerce.
Fourth Marshal. Fifth Marshal.

The committee appointed the following gentlemen to act as Marshals on the occasion:

Capt. H. H. Gear, Messrs. Philip Barry, Wm. B. Green, George M. Mitchell, Legrand Morehouse.

The procession will form at the Court-house, and proceed down Main street to the steamboat landing, where it will embark on board of boats prepared for the occasion to take them to the vicinity of the place where the work is to commence.

A general invitation is respectfully tendered to the ladies of Galena, and the surrounding country, to repair on board the boats previous to the time of the procession reaching it.

☞ The business men of Galena are requested to close their stores and shops on that day.

PHILIP BARRY,
GEORGE M. MITCHELL,
JOHN L. SLAYMAKER,
JOHN H. WEBBER,
H. H. GEAR,
WM. SMITH,
Committee of Arrangement.

Galena, *May* 23, 1838.

GALENA, *May* 28, 1838.

To WILLIAM KINNEY, Esq.

President of the Board of Public Works for Illinois.

SIR: By the annexed printed account of a public meeting the citizens of Galena, held on the 17th inst., it will be perceived that it is made my duty, as chairman of that meeting, to transmit to the Board of Public Works for Illinois a copy of their proceedings, which I now beg leave to do through you, (as the President of the Board) for their consideration, and such action as may be deemed right and proper.

I am, very respectfully,

CHARLES S. HEMPSTEAD.

COMMUNICATION.

At a large and respectable meeting of the citizens of the town of Galena, held at the Court-house on the 17th May, 1838, convened for the object of taking into consideration the termination of the Central railroad, Charles S. Hempstead was called to the chair, and R. W. Brush appointed secretary.

The following preamble and resolutions were adopted:

Whereas the law provides that the northern termination of the Central railroad should be in the town of Galena; and

Whereas, at the time of the passage of said law, Galena was on the west side of Fever river; and

Whereas the location of the termination on the east side would cause a great depreciation in the value of property on the west side of the river, and operate injuriously on the mercantile interest, by the extra charges on the reception and delivery of goods: Therefore,

Resolved, That the interest of the whole town of Galena imperatively demands that the northern termination of the Central railroad should be on the west side of Fever river; and that we, the citizens of Galena, have a right to be heard in the matter, and will use all proper and lawful means to secure the location of that termination on the west side of Fever river.

Resolved, That the proceedings of this meeting be forwarded to the Commissioners of Internal Improvements for the sixth judicial circuit, and to the Board of Internal Improvements, and be published in the newspapers of Galena.

CHARLES S. HEMPSTEAD, *Chairman.*

R. W. BRUSH, *Secretary.*

GALENA, *May* 28, 1838.

Hon. WILLIAM KINNEY,

Chairman of the Board of Public Works, Vandalia.

SIR: In my communication of the 24th inst., (of which I transmit a duplicate herewith, in case of accident to the original,) I omitted to draw your attention to the Chicago and Wisconsin railroad, in connection with that of Illinois.

In case the latter should be passed to the west side by a bridge, and a depot established *here*, the junction would naturally be made from the ridge by which the former could reach this place, and with equal advantage at either extremity of the town at which the bridge might be placed; but if the terminus contemplated by the acting Commissioner should be adopted, it cannot reasonably be expected a junction would be formed here by either of them, inasmuch as the passage of the river, being by means of *ferry*, would make it necessary *for them* to establish a depot on *this side*, and the cost of transportation would be increased by *drayage* to the boat and ferryage across. Comment seems unnecessary.

I remain, very respectfully,
Your most obedient servant,
H. H. GEAR.

D.

CENTRAL RAILROAD OFFICE,
Dixon, December 4, 1838.

To JOHN DIXON, Esq.
Acting Commissioner of the Sixth Judicial Circuit.

SIR: Having completed the preliminary surveys of the Central railroad in that part of the sixth judicial circuit west of the Winnebago swamp, agreeably to your instructions, I have now the honor of presenting to you the following statement of the nature of the route and the estimated cost of grading the same.

Of that portion of the road extending from Galena southerly, twenty miles located and put under contract in May last, by order of the Board of Commissioners of Public Woaks, estimates, maps, and profiles have been duly rendered.

The progress of the work upon this division may be seen by reference to the annexed tabular statement, which exhibits the various kinds of work that has been done up to the 26th of November, 1838. The contracts let in may last were taken, mostly, by efficient and responsible contractors; and, notwithstanding the unfavorable circumstances which were calculated to retard the progress of the work during the sickly season, the work, with the exception of Dr. Powers' and Dougherty's contracts, have been prosecuted with an energy highly commendable to the contractors now engaged upon the work. The unusual difficulty experienced in this section of the country, last season, of procuring laborers, will, most probably, render it impossible to complete the grading of the whole division by the time specified in the contracts.

The nature of the work, as found during the progress that has been made, is quite as favorable as was anticipated, and it is confidently believed that the work can and will be completed without undergoing any change from the present contract prices.

The line from the southerly termination of that part of the road now under contract has been finally located as far as Savannah, and is here designated as the third division south of Galena—distance, ten and four-fifth miles.

The line, as located, continues down the valley of the Mississippi to Savannah, passing over favorable ground for the construction of the road, except the last two miles above Savannah. Here the high ground bordering on the Mississippi terminates with bold, and, in several places, with almost perpendicular banks, which rise to the height of 200 to 250 feet above the river. This is the only point attended with any difficulty. The line approaches near the river, and that to a very steep side hill. At each of the points, it is proposed to build a supporting wall on the river side. The steep side hill along which the line is traced is composed principally of rock, and will furnish a sufficient supply of stone suitable for the supporting wall, culverts, &c., required on this division. The location of the line between Galena and Savannah is unavoidably confined to the valleys of Fever and Mississippi rivers, without the least posibility of deviating therefrom. The views of many individuals in relation to the location of the road, in this vicinity, seem to demand a brief explanation of the difficulty that would have to be encountered in order to meet their views, by adopting a location more into the interior of the country. The formatiou of the ground in this vicinity presents, throughout, an irregular and broken surface. The dividing ridges between the several streams that empty into the Mississippi rise to the height of 250 to 300 foet above the bottom land of the valleys. From the known difficulties which here exist, it is evident that a route passing into the interior of the country, or deviating from the valley route, would be entirely impracticable.

Estimate of the probable cost of the third division.

104,134 cubic yards excavation, at 18 cents - -	$18,744 12
17,356 cubic yards solid rock excavation, at $1 35 -	22,562 80
17,356 cubic yards loose rock excavation, at 60 cents	10,413 60
142,840 cubic yards of embankment, at 20 cents -	28,568 00
300 perches rubble hammered masonry for bridge abutments, at $6 - - - - -	1,800 00
2 arched culverts, at $250 each - - -	500 00
4 square culverts, at $100 each - - -	400 00
4,548 cubic yards supporting-wall, at $1 - -	4,548 00
Grubbing and clearing - - - -	1,200 00
Total cost of ten and four-fifth miles - -	$88,736 52
Cost per mile - - - - -	$8,216 33

The location of the line between Savannah and the Winnebago swamp seemed at first to present many difficulties of such a nature that the comparative advantages of the different routes could not be ascertained, without a careful instrumental examination of a large extent of country.

A part of our examination was made with a view to comply, if possible, with the general instructions of the Board of Commissioners, requiring (at that time) the location of roads to be made with a view to a

maximum grade of forty feet per mile. This could only be effected by continuing down the valley of the Mississippi some 18 or 20 miles below Savannah, thence through to Rock river by the valley of the Cat-tail swamp.

It is almost needless to say that such a location would not benefit the country, or even carry out the main object sought to be accomplished by the construction of the works.

The next line examined between Savannah and the Upper rapids on Rock river, continues down the valley of the Mississippi about eight miles; leaving the valley, the line then follows up the valley of Johnson's creek to the dividing ridge between Johnson and Little Rock creeks; thence to Rock river, passing over an undulating and broken surface. The principal difficulty encountered on this line is the crossing of several branches of the Little Rock and Elkhorn creeks. The general direction of these streams are about at right angles to the course of the line. The maximum grade, by this route, is 71 feet per mile.

At the time these examinations were made, my division extended only to Rock river—each line corresponding with the examinations that were made by the engineer in charge of the surveys in the seventh judicial circuit.

According to given instructions of August last, my examinations were continued south of the river to the Winnebago swamp, connecting with the line as finally located from this place to Peru.

It may be proper here to remark that, from the several examinations made in 1837, it was ascertained that the most favorable point of crossing the Winnebago swamp was at the Rocky ford; this, then, being determined, our subsequent surveys were directed to this point.

During the surveys made through this section of country, upwards of 220 miles have been instrumentally examined. Maps, profiles, and estimates have been made of such lines as appearedt o be the most favorable; and after comparing the results of the different lines, I have selected the one that was found least expensive and best suited to the wants of the cruntry. For a more particular and detailed description of this route, I beg leave to submit to you the report of G. W. Clarke, as exhibiting the result of our examinations.

From the geographical position of this part of the country, it will be seen that the country to the southwest of this route has, at most seasons of the year, the benefit conferred upon it by the navigation of the Mississippi; consequently, the advantages resulting to the work are by no means so great or beneficial to the country as it will be by adopting the northern route.

It is evident that the further into the interior this road can be carried, without incurring additional expense in connecting the points named in the internal improvement law, the greater will be the benefit resulting from it.

Another and an important consideration is, that this route passes through the most beautiful and fertile section of country to be found between the Mississippi and Rock rivers. The rapidity with which this portion of the country is now settling, and the evident prosperity of the town of Dixon, Buffalo Grove, the Elkhorn, and Prestonville settle-

ments, furnish sufficient evidence to justify the conclusion, that the location, as here recommended, is decidedly best calculated to promote the interests of the work.

Respectfully submitted by your obedient servant,

W. B. GILBERT, *Civil Engineer.*

STATE OF ILLINOIS, *Fayette county:*

Personally came before the undersigned, a Justice of the Peace in and for said county, William B. Gilbert, and made oath that the facts and statements by him set forth in the foregoing report, as engineer, and signed by him, are true according to the best of his knowledge and belief.

Given under my hand and seal this 8th day of January, 1839.

W. HODGE, *J. P.–F. C.*

Table of Grades for Third Division south of Galena.

No. of grades.	Distances, in feet.	Inclination per mile.	Direction of each grade.
1	.2100	11.5	Ascending.
2	.3000	46.8	Descending.
3	1.1520	–	Level.
4	.4000	51.2	Ascending.
5	.4000	6.7	Descending.
6	.2900	5.6	Ascending.
7	.2500	7.6	Descending.
8	.3800	60.4	Descending.
9	.1500	49.7	Ascending.
10	.5100	12.3	Descending.
11	1.1220	7.3	Ascending.
12	.1500	27.6	Ascending.
13	.1500	23.9	Descending.
14	1.1200	–	Level.
15	.3500	14.6	Descending.
16	.2100	28.8	Ascending.
Total	10 4-5 miles		

To WILLIAM B. GILBERT, Esq.

Senior Assistant Engineer on the Central Railroad.

SIR: After having completed the experimental surveys committed to my charge, between Savannah, on the Mississippi, and Rocky ford in Winnebago swamp, I am enabled to present the following report, which is respectfully submitted.

The route has been divided into the following five divisions, viz:

First division, from Savannah to one mile east of Prestonville.

Second division, from one mile east of Prestonville to the junction of the line with the Galena road, three miles west of Chamber's grove.

Third division, from last point to St. Marion, in Buffalo grove.
Fourth division, from St. Marion to Dixon, on Rock river.
Fifth division, from Dixon to Rocky ford.

The route has also been sub-divided into 49 sections, corresponding to the grades. The excavation and embankment have been calculated for each section, but, for convenience, the totals for each division are here exhibited in table B appended. The remarks which follow will refer to the divisions, in order, commencing with the

First Division.

From Savannah to the vicinity of the Small lakes, 4½ miles to the southeast of that place, the ground is admirably adapted to the cheap construction of the road. Sand stone of a good quality is found here in abundance, for the construction of the bridge across Plumb river, and the culverts required in this section. From the vicinity of the Small lakes, the summits of the dividing ridge between Straddle and Johnson's creeks, an elevation of near 200 feet is obtained by grades of 62 and 64 feet per mile. On such grades, at a velocity of 10 miles per hour, a locomotive can draw but one-fourth the load it will draw on a level; consequently, the load on the whole line would have to be accommodated to these steep grades. This fact shows the necessity of reducing the grades, if possible, even at an increased expense. With this object in view, I made a reconnoissance of a route to the north of the dividing ridge; commencing near Prestonville, following down a branch to Straddle creek; down that creek to its confluence with Plumb river, by the southeast side of said river to Bowen's saw-mill, crossing the river at this place; thence by a favorable line to Savannah. It is to be observed that the crossing of Plumb river at this place is very good, as both sides are furnished with solid rock abutments; and the only expense will be the superstructure, which cannot exceed $4,000. The objections offered to this route are the crossings of Straddle creek several times with bridges, and the increase of distance probably from a half to three-fourths of a mile. This route is worthy of a survey before a final location.

Second Division.

This division, consisting of about 14 miles, contains but nine-tenths of a mile of 31 feet grade, and the remainder all below 25 feet per mile. The line here is on the top of the ridge, thereby avoiding culvert masonry and expensive grading.

The soil of this, as of the preceding division, is of a rich alluvial character, and will present no difficult rock cutting.

This ridge divides the waters of Straddle creek on the north from those of Little Rock river at the south, and, five miles east of Prestonville, is intersected by a ridge from the south, dividing the waters of Johnson's creek from those of Little Rock river, at a hill which may be appropriately called Ridge Knob. By keeping on the ridge, all those objections are avoided which must hold against a line run further south; for it must necessarily cross the above named ridge, the marshy district of Cat-tail swamp, the valley of Johnson's creek, and the valley of Little

Rock river. In fact, it seems impossible to choose a line in this broken district of country, more admirably adapted for the construction of a railroad than the one which has just been surveyed.

Third Division.

From the end of the second division, the bottom of Middle creek is attained by a descending grade of five feet per mile, for two miles. The creek bottom is from five to six hundred feet wide, and of a gradual slope, permitting the line, which is nearly straight here, to be located on a dry and substantial soil. From the mouth of Middle creek, the line ascends Elkhorn creek to Chamber's mill; one-fourth mile south of which it commences to ascend the ridge at a grade of 63 feet per mile, for near a mile and a half; thence to Buffalo grove by a gradual ascent, a distance of 13½ miles. For the distance of four and a half miles, the valleys of Middle and Elkhorn creeks present a surface very even, and easily graduated, admitting of grades not exceeding 14 feet per mile.

Near the creek, in section 21, is found a horizontal strata of sand stone easily quarried, which will furnish stone for the culverts in this section, and for the bridges across Middle and Elkhorn creeks.

It may be proper here to mention the probability of finding another route, which may have the effect to shorten this division from two to three miles. This proposed route commences at the end of the last division, and, instead of descending to Middle creek, keeps the ridge to the timber of Chamber's grove; descends to Elkhorn creek above Chamber's mill, and ascends the valley of a large branch of Elkhorn which heads near Buffalo grove. The allotted time for the completion of the survey did not permit me to make a thorough reconnoissance of this part of the country.

From the valley of Middle creek near its confluence with Elkhorn, a line was run nine and a half miles in length, passing up a spur into the main dividing ridge between Elkhorn and Eagle creeks. This line passes half a mile west of Journay's store, continues the ridge to the north of Waterberry's, claim; thence to an intersection with the line previously run at Barr's on the west edge of Buffalo grove. It proved 250 feet longer than the one on which the estimate was made, and was objectionable as regards curvature, there being a curve, near the creek, of 600 feet radius.

Fourth Division.

This division commences at the flourishing little village of St. Marion, in Buffalo grove, and extends to Dixon, on Rock river.

The alluvial character of the soil, and easy graduation of this, much resembles that of the second division.

A bridge will be required to cross Rock river, of the following dimensions: 630 feet in length; three arches 210 feet square; two piers 16 feet thick, and 35 feet wide at the foundation, tapering to 11 feet thick and 31 feet wide at the springing of the arch. This bridge must have an elevation of 35 feet above the common stage of water, so as not to interfere with the steamboat navigation of Rock river. The width of the

bridge to be 30 feet, so as to furnish a road-way for teams, and the viaduct for the railroad, agreeably to the provision of the State law. The estimated cost of this bridge, calculated from the foregoing dimensions, will be found in table B. Stone of a suitable quality can be obtained near at hand, and cannot exceed five dollars per perch. The superstructure on the plan of Col. Long, so generally adopted throughout the United States, cannot fail to furnish a permanent and beautiful structure, partaking of that stability so honorable to State works.

Fifth Division.

Our last field operation was the completion of this division on the fifth of the present month. The distance from Dixon to the end of this division is 12.6 miles, somewhat shorter than the road. On this division there are three miles of 58 feet grade; two miles of 30 feet; and the remaining grades not exceeding six feet per mile.

Route from the end of the Second Division, via Elkhorn grove, to its intersection with the former line at Rock river.

It yet remains for me to give you some account of this line, on which time has not permitted an estimate to be made. From near the Galena road three miles west of Chamber's grove, the line keeps the ridge to the south, which it descends by a grade of 50 feet per mile, for two miles, to Humphries' claim, where it crosses Elkhorn creek, and passes through the fine timber of that grove, for four and a half miles. In this distance the line overcomes two summits—the one on the ridge dividing the waters of Elkhorn from those of Eagle creek, near Morgan's claim; the other at the school-house on Clark's claim, on the ridge dividing Eagle creek from Buffalo creek. The first ridge is ascended by a grade of 56 feet, and descended by a grade of 40 feet per mile. The second ridge is ascended by a grade of 52 feet per mile, and descended by a grade of 48 feet per mile. From the point which is now attained near Thomas Wardin's house, the line proceeds across the valley of Buffalo creek over, a gently undulating plain, to the Hamilton Mounds; thence across the valleys of Sugar creek and Dry run, by the claims of Mr. Fellows and Col. Stephenson, to Rock river.

The route on which the estimate is made is preferable to this as to grades; though the undulations of this line are somewhat compensated by the fine timber it passes through.

Curvature.

There are but two curves on the estimated line, of 700 feet radius; all others exceed 1,900 feet radius—the first offering a resistance of two and a half pounds per ton, and the second near half a pound per ton. The curvature will be diminished, and the line shortened, on a location.

Thus, you have a brief account of the survey since I entered the service on the 20th of August last.

While sickness made its ravages among several of the brigades in the service, we must express our gratitude for the uniform good health which has existed in the party during the whole campaign.

The members of the party generally have discharged their respective duties in a very harmonious and satisfactory manner. Messrs. George

H. Hubbell and Henry Wing, my assistants, have been remarkably attentive to their duties, and deserve the highest commendation.

After a careful examination of the country between the Mississippi and Rock rivers, and considering that, 20 miles below Dixon, these rivers approach within 15 miles of each other, thereby in a measure superceding the necessity of communication by a railroad, I must express my decided opinion in favor of Dixon, as a crossing place. This flourishing town, beautifully situated on the banks of Rock river, becomes a point necessarily independent of any local consideration, for it is but two miles north of a straight line drawn from Savannah to Rocky ford; and in that distance, either above or below the town, it would be impossible to find so favorable a crossing place. The water here is never known to overflow its banks, and abundance of stone is found on the margin of the river.

The benefits conferred on the thickly settled groves of Elkhorn and Buffalo, through which the road passes, and the great extent of farming country which will be immediately benefitted by it, are sufficient of themselves to fix the location of the road in this favored land. The salubrity of the climate, and the fertility of the soil, must increase the unexampled emigration which has been flowing to this part of the State for several years past. The soil will support and enrich them; and when we consider that one thousand persons per week passed through Chicago alone during this fall, on their way to this great and growing country, we see this view realized.

Independent of the immediate interests of her citizens, the State must reap great advantages by the value of the stock, which, like that of the State improvement in New York and Pennsylvania, must become immensely valuable, and yield a handsome revenue to her treasury.

The transportation of articles for the consumption of the northern part of Illinois, and the population who are rapidly settling the Black Hawk purchase in the new Territory of Iowa, must be done by the communication which this road will open with the great chain of northern lakes. Its construction is now loudly called for, when we consider that the low stage of water in the Ohio and Mississippi has prevented merchandize to the amount of more than a million of dollars from ascending the river to supply the market of Galena above, and must now be prevented from reaching its destination, in consequence of the ice, until the close of the winter season.

For the details of grade, distance, levels, &c., you are referred to table A in the appendix. For the estimated cost of excavation and embankment, &c., you are referred to table B.

It is to be remarked that the line obtained by survey is 66.9 miles in length, and the distance between the extreme points in a straight line is 50 miles, thereby furnishing the favorable proportion of the straight line to a curvilinear line for the railroad, as four is to five nearly. The average cost is $4,236 per mile, which appears sufficiently liberal, considering the nature of the ground.

With the highest respect,

Your obedient servant,

GEORGE W. CLARKE,

Assistant Engineer on the Central Railroad.

A.

Table exhibiting the route from Savannah via Dixonville, on Rock river, to Winnebago Swamp.

No. of grade.	Length of each grade.	Inclination.	Grade per mile.	Miles from Savannah.	Height above Fever river.	Location.
1	568	Descent	28.25	.568	20.25	Savannah.
2	739	Level	-	1.309	4.20	Bottom land.
3	681	Ascent	34.32	1.990	27.60	Cross Rum river.
4	1,837	Descent	8.71	3.827	11,60	Near lakes.
5	1,515	Ascent	64.94	5.342	110.00	Slough in prairie.
6	795	"	7.65	6.137	116.09	"
7	1,401	"	62.04	7.538	203.04	High mound.
8	681	"	15.57	8.219	213.06	Summit.
9	1,439	Descent	12.40	9.658	196.20	Opposite Preston's.
10	1,590	Ascent	29.30	11.248	242.82	Master's house.
11	1,174	Descent	3.96	12.422	238.17	"
12	1,515	Ascent	7.92	13.937	250 17	Open prairie.
13	1,553	"	21.02	15.490	282.97	Ridge Knob.
14	1,212	"	5.01	16.702	289.01	"
15	1,742	Descent	6.33	18.444	277.97	Road to Dixon.
16	909	Ascent	25.08	19.353	301.01	"
17	1,515	Descent	3.16	20.868	296.21	On high ridge.
18	2,310	Ascent	9.50	23.178	318.17	"
19	946	"	31.94	24.124	348.42	"
20	1,098	Level	-	25.222	-	On ridge.
21	2,613	Descent	57.55	27.835	198.00	Valley of Middle creek.
22	2,651	"	14.78	30.486	158.80	"
23	1,931	Ascent	7.39	32.417	173.08	Valley of Elkhorn.
24	1,704	"	63.88	34.121	281.98	Chamber's mill.
25	2,083	"	5.91	36.204	294.30	"
26	1,742	"	22.70	37.946	333.86	Canadian claim.
27	871	Descent	2.90	38.817	331.33	Barr's.
28	1,439	"	66.00	40.256	236.33	Buffalo creek.
29	113	Level	-	40.369	-	St. Marion.
30	1,325	Ascent	58.13	41.694	314.73	Kellog's claim.
31	1,742	Descent	28.51	43.436	265.05	Stephenson's claim.
32	1,098	Ascent	12.67	44.534	278.97	Prairie.
33	1,363	Descent	35.90	45.897	230.01	Gee's farm.
34	719	"	58.34	46.616	188.02	Dividing ridge.
35	1,023	Ascent	46.20	47.639	237.02	Prairie.
36	2,197	"	5.96	49.836	250.12	Cross Galena road.
37	530	Descent	36.16	50.366	230.94	
38	1,628	"	4.64	51.994	223.46	Charter's farm.
39	2,162	"	65.20	54.156	82.50	River hill.
40	217	Level	-	54.373	-	Dixon.
			Winnebago Division.			
41	2,272	Ascent	58.13	56.645	216.90	Talmage's.
42	758	Descent	6.28	57.403	212.14	
43	758	"	58.08	58.161	168.14	Three-mile branch.
44	1,008	Ascent	30.01	59.259	201.11	
45	1,553	"	4.48	60.812	208.08	Prairie..
46	947	"	23.23	61.759	230.08	Summit.
47	871	Descent	30.88	62.630	203.17	Prairie.
48	2,234	"	3.56	64.863	195.20	"
49	2,122	"	6.60	66.986	181.20	Winnebago.

B.—Table exhibiting the estimated cost of Graduation.

First Division, 11.25 miles.

Sections.	Excavation, embankment, bridges, culverts, &c.	Cubic yards.	Perches of stone.	Price.	Cost of each.	Total amount.
	Excavation - -	149,336	-	$0 18	$26,880 48	
	Embankment - -	130,476	-	19	24,786 44	
4	371 rods of grubbing - -	-	-	62½	231 87	
5	Culvert 2 by 2 - -	-	14	3 00	42 00	
7	Bridge 10 by six - -	-	164	3 00	492 00	
8	Culvert 4 by 4 - -	-	67	3 00	201 00	
10	Culvert 2 by 2 - -	-	14	3 00	42 00	
4	Bridge at Rum river -	-	640	3 00	1,920 00	
	300 feet superstructure -	-	-	15	4,500 00	
						$59,095 79
	Second Division, 13.97 miles.					
	Excavation - -	109,935	-	15	16,490 25	
	Embankment - -	167,372	-	16	26,779 52	
13	Culvert 2 by 2 - -	-	17	3 00	51 00	
						43,320 77
	Third Division, 16.47 miles.					
	Excavation - -	160,746	-	17	27,326 82	
	Embankment - -	120,658	-	18	21,718 44	
	Bridge at Middle creek -	-	64	2 50	160 00	
	50 feet superstructure -	-	-	15	750 00	
21	2 culverts 3 by 3 - -	-	65	2 50	162 50	
	Bridge at Elkhorn creek -	-	120	3 00	360 00	
	90 feet superstructure -	-	-	15	1,350 00	
24	200 rods grubbing - -	-	-	62½	125 00	
	Culvert 3 by 3 - -	-	57	3 00	171 00	
26	2 culverts 2 by 2 - -	-	32	3 00	96 00	
	Bridge on Buffalo creek -	-	150	3 00	450 00	
	40 feet superstructure -	-	-	15 00	600 00	
28	Culvert 2 by 2 - -	-	25	3 00	75 00	
30	Culvert 3 by 3 - -	-	33	2 00	66 00	
						53,410 76
	Fourth Division, 12.67 miles.					
	Excavation - -	123,823	-	16	19,811 68	
	Embankment - -	113,515	-	17	19,297 55	
	3 culverts - -	-	68	3 00	204 00	
	Bridge at Rock river, masonry, rubble work - -	-	4,540	5 00	22,750 00	
	700 feet superstructure -	-	-	20 00	14,000 00	
	2 culverts - -	-	46	3 00	138 00	
	160 rods grubbing -	-	-	50	80 00	
						76,281 23
	Fifth Division, 22.61 miles.					
	Excavation - -	194,810	-	16	31,167 60	
	Embankment - -	108,402	-	17	18,428 34	
8	1 culvert - -	-	28	3 00	84 00	
7	2 culverts - -	-	46	3 00	138 00	
6	1 culvert - -	-	28	3 00	84 00	
5	1 culvert - -	-	80	3 00	240 00	
4	Bridge on Three-mile branch -	-	480	3 00	1,440 00	
1	1 culvert - -	-	33	3 00	99 00	
						51,682 94
	Total amount - - - - - - -					283,791 49
	Cost per mile - - - - -				$4,236 00	

CENTRAL RAILROAD—SOUTH OF VANDALIA.

JANUARY 31, 1839.

Read, and laid on the table.

Mr. SMITH, of Wabash, from the Committee on Internal Improvements, made the following

REPORT:

The Committee on Internal Improvements, to which was referred a resolution directing said committee to inquire into the expediency of providing by law that, in the location of the Central railroad, it shall pass through the town of Vienna, in Johnson county, Frankfort, in Franklin county, Mount Vernon, in Jefferson county, and Salem, in Marion county, the same being the several county seats of said counties; also, directing said committee to take into consideration the advantage that would arise to the State and the towns above named, and the citizens of the counties aforesaid, by making such alteration, having had the same under consideration, beg leave to report:

That, after having given the subject that careful examination which its importance required, they have ascertained that the route contemplated by the resolution will require sixteen miles more of railroad than the one already surveyed and partly constructed; and that the additional expense of constructing the same, together with the loss to the State by the desertion of the present route, upon which a large amount has been already expended, will be over $200,000. This fact has induced the committee to look more particularly into the comparative advantages of the different routes to the whole State, and to particular portions of the State.

It was supposed by those who projected, and it is believed by those who still support, the system of internal improvements, that this will be one of the great channels of communication and transportation between the far south and east and the different parts of our own State; that, during a great portion of every year, and nearly the whole of some years, it will be almost the only means by which our State can be supplied with articles of commerce purchased in the southern and eastern markets, and by which we can return the productions of our own soil. If this supposition be true, and nothing short of its truth can justify a project so extensive, is it not necessary that devious and circuitous routes should be avoided, which, while they lengthen the time and distance, must also greatly increase the

expenses of transportation? In the present instance from the southern terminus to Vandalia—a distance of one hundred and forty-eight miles by the present surveyed line, and one hundred and sixty-four miles by the one contemplated by said resolution—the difference in the cost of passage of right by the adoption of the latter will exceed ten per centum; and thus, while the change may favor the interests of some two or three county towns, it will prejudice the important interests of the whole State.

Whether more travel or transportation would be brought to the road from the adjacent country by the proposed change, is a matter of doubt in the mind of your committee. As at present surveyed, it passes through a fertile country unsurpassed for natural resources or the promise of future wealth—a country as densely populated and as rapidly improving as any part of that portion of the State, and one without any natural or artificial communications with the great rivers except by the common roads of the country; while, on the other hand, two of the counties referred to in said resolution have railroads projected through their county seats—and another lies on the Ohio, with as good landings as any other river county in the State. Johnson county, of which Vienna is the county seat, is not only provided by nature with a convenient market, but, by legislative provision, has already received its portion of the fund provided by the internal improvement system for the use of those counties not directly benefitted by its works.

The town of Frankfort, the county seat of Franklin county, is passed by the Shawneetown and Alton railroad, which intersects and connects with the Central railroad not more than fifteen miles west of Frankfort.

The Mount Carmel and Alton railroad passes through Salem, the county seat of Marion county, and intersects and communicates with the Central railroad about nine miles to the west of said county seat; besides which, the Great Western mail route, one of the best roads in the Union, traverses the county through its centre; so that, although Franklin and Marion may be truly interior counties, without natural means of intercommunication, the liberality of a previous Legislature has already supplied them liberally with artificial means of trade and travel.

Jefferson, the other county referred to in said resolution, is not so particularly benefitted by the present system—the Central railroad running along the western boundary of the county at a distance of about twelve miles from Mount Vernon, its seat of justice; and if it be necessary, or if the interests and business of that town are sufficient to justify any alteration in the present internal improvement law, so as to connect it with the Central railroad, the cheapest and most economical as well as the best way to accomplish the object would be to construct a lateral branch to that town, which could be done at a less expense than the proposed route, of at least $100,000. Certainly, then, if it be a correct policy to scatter rather than concentrate the benefits arising from legislative action, three at least of the counties referred to in said resolution should rest satisfied with the advantages they are already promised by the law as it now exists.

When the internal improvement system was first projected in this Legislature, the conflicting sectional interests of the counties near the

anticipated line of the southern portion of the Central railroad settled down into a mutual and general understanding and agreement that no point should be made by law between the southern terminus and Vandalia; but that the Board of Public Works should select the most direct and economical route between the two points. To this understanding, the gentlemen who then represented the counties referred to in the said resolution were parties. With such understanding, and in carrying out such agreement, the said system became a law; and said Board have now surveyed, and partly located and constructed, the said road, particularly regarding the provision of the law which directs them "to occupy the most direct and eligible route between the commencement and termination, and to adopt such plan and profile for the various roads as will be productive of the greatest useful effect in their operation that the nature of the country over which they pass and an economical construction will admit of." There is no doubt in the minds of this committee but that the provisions of the law, which substantially embody the conditions of said agreement, have been fully carried out and complied with by the Board. The route selected, besides being a very direct one, passes over a section of country the face of which is generally level and unbroken, requiring comparatively little excavation or embankment; and your committee are of opinion that no line can be run at any considerable distance from the present surveyed route, which will not run over a more broken country, and require in its completion a much greater expenditure; but even if it be true that one equally good could be selected, so that its line should pass through the towns aforesaid, to make use of that selection would be an unjustifiable invasion upon the rights of those who, with the understanding that, by mutual concession of all the parties interested, and under the supervision of law, the route had been located and fixed, have invested their money, and fixed their homes upon such surveyed and located route.

Another objection to the proposed change of this line of work by special enactment, taking it out of the general principles of the original law, is the evil effects that may flow from the precedent.

For these several reasons, your committee are of opinion that the law, so far at least as this question is concerned, should remain as it is; that the proposed change is altogether impolitic, and uncalled for; and that the officers under the law should be permitted, as they have commenced the work, to prosecute it to its final completion.

LETTER

OF THE

PRESIDENT OF THE BOARD OF PUBLIC WORKS

RELATIVE

To the kind of iron used for railroad purposes, &c.

February 1, 1839.
Read, and laid on the table.

Internal Improvement Office,
Vandalia, January 28, 1839.

To the Hon. the House of Representatives
of the State of Illinois.

The Board of Public Works of the State of Illinois, in answer to a resolution of the House asking for information in relation to railroad iron, &c., beg leave to report:

That the iron now used by the Board in pursuance of the 38th section of the internal improvement law, is two inches and one-quarter wide, and five-eighths of an inch thick, and weighs about thirteen pounds per yard. Experience has shown that said iron is sufficient, in strength and durability, for the successful operation of steam-power upon the road, when properly laid upon good timber.

The answer to the inquiry, whether any change is desirable in the iron, the board can only say that, in constructing the railroads of Illinois, the Board have thought it their duty to study economy in the construction thereof, and to use such iron and other materials as would be within the means provided by the Legislature as far as possible for the construction of said works; yet, at the same time, it has been their intention to make said roads useful for the proper application of steam-power. With that view, this description of iron has been adopted, and so far the same has proven sufficient; and the Board will say that, if said iron is well laid and spiked down and fitted with good splicing plates upon good sound rails of suitable timber, it will make a very good road.

The Board will not disguise the fact that, if said 38th section of the law was so changed as to dispense with the longitudinal rails, and permit the Board to use such superstructure as to be suitable to a kind of iron

denominated the T or H rail, which is set in proper cast iron chairs, bolted upon the cross-ties, the road would be better and much more durable, and at the same time much more useful for the safe and successful operation of steam-power. This iron, set in chairs, is believed to be preferable, because it is better adapted to resist the lateral pressure of the train which often occurs in its rapid motion upon the curves. It is believed too, that, owing to the high winds to which the open plains of Illinois are subject, this pressure upon many of our roads will often be great, even upon the tangents; therefore, to use any kind of iron, or other structure that would raise the points of lateral pressure to any considerable height above the cross-ties which bind the two tracks together, without in some other way providing against the consequences of such pressure, would be to make a road that would constantly be liable to be thrown out of adjustment, and consequently become dangerous and often useless.

While upon this subject, it may not be improper for the Board to mention that it is believed that the width of track as now provided by law is not sufficient. If the same was five feet, it would give more room for the machinery and greater space in the cars, and would be better adapted to resist the lateral pressure, and prevent the oscillating motion of the train often occasioned thereby. In almost all cases in Illinois, the curves may be made large, and consequently the track may be safely made wider than upon roads where, from the undulating surface of the country, the curves must necessarily be smaller.

This kind of chair iron may be had of different sizes and strength; but it is believed that the kind which would weigh about thirty-eight pounds per yard, exclusive of the cast-iron chairs, would be preferable.

The difference of cost between those two kinds of iron cannot be determined at this time, as the cost is constantly fluctuating, and as that cost often depends upon the demand for the article, and the amount in market; but it would be safe to put down the increased difference of cost per ton, for the heavy iron, at fifteen per cent.; and, consequently, owing to its greater weight, would cost much more than the flat bars.

The question, whether the one or the other of those two kinds of iron shall be used, is properly a question within the discretion of the Legislature; and if that honorable body shall believe that the State will have it in its power to supply the necessary means to make (in the first instance) a railroad of the most permanent and durable kind, then it would be advisable to adopt the heavy iron; but if the General Assembly shall be of opinion that a cheaper road, and one that will answer the present purposes, shall be first adopted, then the light iron may be used upon the first superstructure; and afterwards, when it may become necessary to replace the first timber structure, then the State will have had more experience in the construction and use of railroads; and in the meantime improvements may be made in the form and structure of iron, and the Legislature may then be better advised, and the State better able, to adopt a more costly and durable structure. But this is all for the decision of the Legislature, in which they in their wisdom will exercise a sound discretion.

For answer to that part of the resolution in relation to the number and weight of locomotives, the Board would state, by order of the Commissioner of the first judicial circuit, acting under the authority of the Board,

the Fund Commissioners purchased for the use of the Northern Cross railroad one locomotive, which, however, never arrived to the State, but, as the Board is informed, was lost on its passage. Said Fund Commissioners also purchased an engine for the Pekin, Bloomington and Mackinaw road; and, as that road was not in a situation to receive it, the same was placed upon the Northern Cross railroad, where it is now in operation. The Board is unable to report the weight or cost of either of those engines, as the Fund Commissioners have not rendered an account to this Board, or the Commissioner of the first circuit, of the cost of those machines, and as there is no means of ascertaining the precise weight of the engine now in use; but the Board is informed that it weighs about eight and a half tons. The cost of transportation of the locomotive now in use has been paid by the Commissioner of the first circuit. It came when the waters were low and freight high, and cost about one thousand dollars for transportation.

The residue of this resolution has been fully answered by the general report of the Board, and the accompanying documents, and may be fully understood and ascertained by reference to the Auditor's office, where, by law, the Board is bound to file all evidences of land titles, and of the relinquishments or assessments of the rights of way, and the cost of each.

All of which is most respectfully submitted.

Signed by order of the Board:

WILLIAM KINNEY,
President of the Board.

WILLIAM PRENTISS,
Secretary B. P. W.

REPORT

OF

THE COMMITTEE ON INTERNAL IMPROVEMENTS

OF THE

HOUSE OF REPRESENTATIVES

OF

THE STATE OF ILLINOIS,

SUBMITTED

TO THE HOUSE, FEBRUARY 16, 1839.

VANDALIA:
William Walters, Public Printer.
1839.

INTERNAL IMPROVEMENT SYSTEM.

FEBRUARY 16, 1839.

Laid on the table, and 3,000 copies ordered to be printed.

Mr. SMITH, of Wabash, from the Committee on Internal Improvements, made the following

REPORT:

The Committee on Internal Improvements, to which was referred so much of the Messages of the late and present Executives of this State, and also certain resolutions directing the Committee to inquire into what modifications of the present system of Internal Improvement are neceesary to be made to bring the system within the means of the State, beg leave to report:

That this subject has received that due share of their attention and deliberation which its acknowledged importance demands; and, after having bestowed on it their calm and sober reflections, they have arrived at the following conclusions:

That the system of Internal Improvements adopted by the last Legislature, on the recommendation of several preceding Executive messages, and of the Internal Improvement Convention then assembled, is within the means of the State to complete without embarrassment to the people, or arresting her career of greatness and prosperity.

That the system being entered into by a solemn compact, the faith of the State is pledged to the people, and to the emigration and settlements which it has induced, to carry it out to its full extent, and not to reduce it unless with the consent of the people immediately affected by the portion of the works proposed to be stricken off or reduced, as manifested by the opposition of their representatives to the system itself.

That all the works having been commenced at various sections in the State, the people of these sections are competent to judge of the value and utility of the system to them respectively; and that so long as they are unwilling to surrender their respective claims, the irresistible conclusion is, that the system is not too large for the wants of the whole people; and that, the system purporting to be a *general system of Internal Improvements*, the faith of the State is indirectly pledged to extend its benefits to those sections of the State not now accommodated, as early and as fully as her means will justify.

The committee propose to confine their investigations principally to the elucidation of the first proposition, upon the correctness and truth of which all the residue must be supported.

It appears by the report of the Board of Public Works to the Governor, and now on the table of the House, that surveys and estimates of the several improvements embraced in the Internal Improvement system have been made. These surveys demonstrate the entire practicability of all the works, and exhibit the most cheering evidence of the superior adaptation of the topography of the State to the construction of railroads of the most useful character. The estimates of the probable cost of the railroads, based upon the actual data derived from the operation of contractors, is no less encouraging, and are calculated to put at rest the vague declarations of the opponents of the system, as to the enormous amount alleged by them to be requisite to carry out the system.

The committee, taking it for granted that the entire practicability of the works will not be questioned, will proceed to the examination of the fiscal means of the State to prosecute them, and the consequent expediency of the system. In pursuing this investigation they will also take it for granted that the expediency of the river improvements and of the Great Western mail route is conceded, and propose to restrict their labors chiefly to an examination of the railroad branch of the system.

By the report of the Board of Public Works, it appears that the system embraces one thousand three hundred and forty-two miles of railroad, at an aggregate estimated cost of $11,470,444 50. The present appropriations for river improvements, is $400,000. There is $200,000 appropriated for distribution among the counties through which no railroad or canal is to be constructed, and $250,000 for the Great Western mail route; making an aggregate of $12,320,444 50. By making a proper allowance for contingencies, and additional appropriations for rivers and mail routes, it is supposed that fourteen millions of dollars will be amply sufficient to complete the present system, with some minor, yet important, additions, and put the whole into operation.

There has been disbursed by the Board of Public Works, up to the date of the report, the sum of $1,079,793 71, in surveys and on construction; and by the Board of Fund Commissioners, in payment to counties and purchase of railway iron, and contingencies, $214,122 83, making an aggregate of $1,293,916 53. The principal portion of this amount was expended during the year 1837.

The framers of the Internal Improvement law had it in view to restrict the operations on the public works so as to make them bear a just proportion to the surplus labor and provisions of the country, and this wise policy should not be lost sight of in the future prosecution of the works. It is estimated by your committee that, in view of the prospective emigration of operatives to the State, at least $2,000,000 annually can be economically expended on the public works, until their final completion, without paralizing the agricultural interests of the State.

The following tabular exhibit, based on the proposed annual expenditure of $2,000,000, shows the amount of debt which will be incurred, and the interest which will be payable up to the first day of January in each year, until the final completion of the works. To arrive at the interest account to be liquidated in each current year, it is estimated

that the amount borrowed in any one year will bear an average interest for half the year in which the sum is borrowed.

The amount of Internal Improvement loans on the first day of January, 1839, as shown by the report of the Fund Commissioners, is $2,204,600, and the interest thereon has been paid up to that day; there being near one million of dollars on hand, there will be required but one million of dollars in addition to be borrowed for the present year's operations.

	Years	Amount of Internal Improvement loan on the first day of January in each year.	Amount of interest payable up to the first day of January in each year.
1	1839	$2,204,600 00	
2	1840	3,204,600 00	$162,276 00
3	1841	5,204,600 00	252,276 00
4	1842	7,204,600 00	372,276 00
5	1843	9,204,600 00	492,276 00
6	1844	11,204,600 00	612,276 00
7	1845	14,000,000 00	756,138 00
8	1846	14,000,000 00	840,000 00

In adverting to the resources of the State to meet the annual liabilities exhibited in the foregoing table, the committee will, in the first place, confine themselves to such means as they believe will not be liable to be questioned by the unprejudiced inquirer after truth, and show the probable deficit to be supplied from other contingent resources and taxation.

The profits to be derived from the banking operations of the State are variously estimated; but taking into view the prospects of the profits to be derived from a sale of State bonds belonging to the State Bank, amounting to $1,750,000, as shown in their report to the Legislature, it is thought a very safe calculation to put the Bank dividends at nine per cent., leaving three per cent. over the interest payable on the bonds sold for the purchase of the stock.

The committee are also of the opinion that the State bonds will hereafter, under any contingencies, be worth a premium equal at least to the difference in exchange between Illinois and the eastern cities, and have therefore averaged their premiums and exchange at two per cent.

They have also taken, as further data for calculation, that the roads as they are completed and put into operation from the rivers to important trading towns in the interior, will soon commence netting a per centage of revenue on the whole amount expended on the finished and unfinished works; which per centage they have assumed, in 1842, will be two per cent., and to increase one per cent. annually thereafter, as the lines are extended and the trade and travel accumulate thereon.

The committee have also assumed the position that the surplus revenue of the General Government distributed to the States, although in name

deposited with the States, is in fact a donation, and will not be demanded, as it cannot be withdrawn from the people without serious interruptions to the settled policy of at least a large number of the States. The committee therefore believe that the third instalment of this fund, which has been already appropriated by this State to internal improvements, can properly be constituted a fund for the payment of interest until the completion of the works, when it may be withdrawn and repaid, if necessary, from the profits of the system.

Upon the foregoing data are based the following statements of the liabilities and resources of each respective year:

For 1839.		
Interest payable up to January 1, 1840 - - -		$162,276 00
To pay this, there is the following, viz:		
Third instalment of the surplus revenue	$142,319 14	
Balance of interest, dividend, &c, in hand of Fund Commissioners, after paying interest up to 1st January, 1839 - -	76,406 78	
Interest on the above amount for one year, about - - - - -	12,000 00	
Dividends on $3,000,000 Bank stock, at three per cent. - - - - -	90,000 00	
Premium and exchange on $1,000,000 bonds sold at two per cent. - - -	20,000 00	
		340,725 92
Balance on hand January 1, 1840 - -		$178,449 92
For 1840.		
Interest payable 1st January, 1841 - - -		$252,276 00
To pay this, there will be—		
The balance on hand January 1, 1840 -	$178,449 92	
Interest on this amount, about - -	10,000 00	
Dividends on Bank stock - - - -	90,000 00	
Premiums and exchange on bonds sold, $2,000,000, at two per cent. - -	40,000 00	
		318,449 92
Balance on hand January 1, 1841 - -		$66,173 92
For 1841.		
Interest payable up to January 1, 1842 - - -		$372,276 00
To pay this amount, there is—		
The surplus on hand January 1, 1841 -	$66,173 92	
Interest thereon for one year, say - -	3,000 00	
Dividends on Bank stock - - - -	90,000 00	
Premiums and exchange, 2,000,000 bonds sold at two per cent. - - -	40,000 00	
Tolls on $3,000,000 of public works expended prior to Jan. 1, 1840, at two per cent.	60,000 00	
		259,173 92
Deficit on the 1st January, 1842 - -		$113,102 08

For 1842.

Interest payable January 1, 1843 - - -		$492,276 00
To pay this, there will be--		
Dividends on Bank stock - - -	$90,000 00	
Premiums and exchange on $2,000,000 bonds sold at two per cent. - - -	40,000 00	
Tolls on $5,000,000 expended on public works prior to the 1st Jan. 1841, at three per cent. - - - -	150,000 00	
		280,000 00
Deficit, January 1, 1843 - - -		$212,276 00

For 1843.

Interest payable January 1, 1844 - - -		$612,276 00
To pay this, there will be—		
Dividends on Bank stock - - -	$90,000 00	
Premiums and exchange on $2,000 00, bonds sold at two per cent. - -	40,000 00	
Tolls on $7,000,000 expended on public works prior to Jan. 1, 1842 at 4 per cent.	280,000 00	
		410,000 00
Deficit on the 1st January, 1844 - -		$202,276 00

For 1844.

Interest payable January 1, 1845 - - - -		$756,138 00
To pay this, there will be—		
Dividends on Bank stock - -	$90,000 00	
Premiums and exchange on $2,800,000 (balance of $14,000,000) at two per cent. -	56,000 00	
Tolls on $9,000,000 expended on public works prior to Jan. 1, 1843, at 5 per cent.	450,000 00	
		596,000 00
Deficit, January 1, 1845		$160,138 00

For 1845.

Interest payable January 1, 1846 - - - -		$840,000 00
To pay this, there will be—		
Dividends on Bank stock - - -	$90,000 00	
Tolls on $11,000,000 expended on public works prior to Jan. 1, 1844, at 5½ per cent. - - - - - -	605,000 00	
		695,000 00
Deficit, January 1, 1846 - - -		$145,000 00

For 1846.

Interest payable January 1, 1847 - - -		$840,000 00
To pay this, there will be—		
Dividends on Bank stock - - -	$90,000 00	
Tolls on $14,000,000 expended on the public works prior to January, 1845, at 6 per cent. - - - - -	840,000 00	
		930,000 00
Surplus, January 1, 1847 - - -		$90,000 00

It will be observed that the above calculations are predicated on the expenditure of two millions a year during the next five years, and three millions in the sixth. If it should be thought most expedient to restrict the expenditures to one million a year, and prolong the completion of the system, the deficits will of course be less in each year.

The foregoing statements bring down the calculation to the first day of January, 1847; at which time it is presumed the whole of the public works will have been completed and in operation at least 18 months preceding.

It is shown by the statements that the deficits, to be supplied by taxation or contingent resources, are as follows, viz:

On the 1st of January, 1842 - - - - -	$113,102 08
1st of January, 1843 - - - - -	212,296 00
1st of January, 1844 - - - - -	202,276 00
1st of January, 1845 - - - - -	160,138 00
1st of January, 1846 - - - - -	145,000 00
And on the 1st of January, 1847 there is shown a surplus of	90,000 00

If these calculations are to be relied on, the deficits to be made up from sources other than the profits of the Bank stock, at its present amount of $3,000,000, and from the public works themselves during the last five years' operations, would be $832,812 08.

This sum your committee believe could be raised by taxation without oppression or complaint on the part of the people, if they could be assured of the capacity of the works to support themselves after their completion.

The following table exhibits, as nearly as the committee can arrive at the information, the probable amount of lands which will be subject to taxation within the several years in which the above deficits will occur; showing, also, the amount of deficits in each year.

The amount of entries, from this time forward, is estimated at one million of acres annually. This estimate, it is thought, is moderate when made in view of the prospective emigation to the State, as well as of the fact that, perhaps, at least one-third of the present population of the State are residing on Congress lands, which now are, and soon will be, subject to entry.

Years.	Deficits.	Number of acres of land taxable.	Annual tax per acre to meet the deficits.
			cents.
1841	$113,102	7,837,208	1.43
1842	212,276	11,500,000	1.84
1843	202,276	12,665,000	1.59
1844	160,138	13,665,000	1.17
1845	145,000	14.665,000	1
1846	Surplus of 90,000	15,665,000	

If the progress of the public works should not be arrested, the emigration to the State for the next five years must be very great; and as capital and producers flow into the country, improvements will be extended, and real estate rise more rapidly in value, and a corresponding increase in the amount and value of personal property will ensue.

In view, then, of this accession of population and increase in the available resources of the State, your committee cannot see any just cause f alarm on account of the deficits which they have shown will probably exist for a few years in meeting the interest on loans.

Your committee would not, however, so far reflect on the sound intelligence of the people as to promise them the benefits of an extensive system of internal improvements in the State without their paying an equivalent for them. But if the people can be assured that this system can be carried on and completed by the aid of a moderate tax, for a few years only, and that it will greatly add to the value of individual possessions, afford a cheap and certain means of transit to market for all our productions, develope the dormant resources of the State, augment her population, and elevate her character at home and abroad, they will be satisfied to sustain it and push it forward to completion.

Having given the quantity of land subject to taxation in the several years in which deficits will occur, and the rate per acre necessary to make up these deficits, the committee will make one additional remark in relation to the taxes on lands. If the lands should be taxed in proportion to their value, and not by the acre, it is very plain that those lying nearest to the public works, and which have been most enhanced in value by their construction, will bear the greatest share of the burdens; and, perhaps, it will not be too much to say that a small per centage on the increased value of the lands in the vicinity of the public works, given to them solely by their construction, will go very far towards meeting the deficits without imposing much additional burden on lands lying remote from them.

In reference to the foregoing statements, it is to be observed that they are based upon the present amount of the banking capital of the State, and no view has yet been taken of its probable increase as the commercial wants of the State, and the future development of its resources may render judicious and necessary.

The mode of resorting to the profits of banking operations, for promoting the prosecution of works of internal improvement, has been adopted by many of the States in the Union with signal success; and this policy can no doubt be pursued in this State with advantage to the great financial interests of the State itself, and at the same time afford valuable facilities to her citizens.

In view of the probable increase in the banking capital, on the part of the State, the following table has been prepared, to exhibit the annual surplus and deficits which would probably exist in the event of an increase of the banking capital, $1,000,000 per year, for the next four years.

In this table, the surplus and deficit in each current year is given opposite to that year, and the premiums and exchange on the bonds sold for the increase of Bank capital are calculated at two per cent. and the tolls are assumed to be the same as given in the foregoing statement.

Table showing the probable surplus and deficits in the fund for the payment of interest on internal improvement bonds, predicated on the increase of the banking capital of the State, $1,000,000 per annum, for the next four years.

Years.	Increased bank capital in each year.	Probable deficit when the bank capital is $3,000,000.	Probable deficit when capital is increased.	Probable surplus on present bank capital.	Probable surplus on increased bank capital.
1839	$3,000,000	-	-	$178,449	
1840	4,000,000	-	-	66,173	$116,173
1841	5,000,000	$113,202	-		72,897
1842	6,000,000	212,276	$25,379		
1843	7,000,090	202,276	62,275		
1844	7,000,000	160,138	40,138		
1845	7,000,000	145,000	25,000		
1846	7,000,000	-	-	90,000	210,000

NOTE.—Fractions less than one dollar are omitted.

There being bills now before the Legislature proposing to increase the banking capital, on the part of the State, at the present session, it may not be improper to allude to the effects of the proposition on the interest fund for internal improvement purposes.

The surplus, as given in the foregoing statement, on the first of January, 1840, is $178,449; and on the first of January, 1841, $66,173.

Should an additional bank capital of $3,000,000 be now authorized, and a portion of this amount constituted a trust fund, to be loaned on real estate at long periods, for the accommodation of the agricultural interests, it is the opinion of the most experienced financiers in the State, that the Banks can make dividends of ten per cent. thereon. It is also believed, from the present condition and prospects of the money market

in Europe, that the bonds, if seasonably put into market, will command at least five per cent. premium, and the exchange thereon would produce a nett profit of at least 6 per cent.—

Then, $3,000,000 bonds, at 6 per cent. is - - -	$180,000
Six months' dividends up to January 1, 1840, at 4 per cent.	60,000
	$240,000
Surplus on the 1st January, 1840, as shown in statements and table, is - - - - - - -	178,449
Making the surplus on the 1st January, 1840 - -	$418,449

As it is uncertain whether this proposition will meet with the favorable action of the Legislature, the committee will not trespass on the time of the House to carry on the calculations for subsequent years. It is obvious, however, that if the proposition should be adopted, and its results are not overrated, it would go very far to reduce the amount of probable taxation as exhibited in the preceding statements.

Your committee would wish to avoid all imputation of indulging in speculative calculations in reference to the resources of the State to meet the interest accruing upon the loans for internal improvements, and they hope that they will not render themselves obnoxious to that charge by adverting to another source of revenue.

The committee on Internal Improvements, in the last Legislature, taking into view the important practical results of the grant, by the General Government, of the canal lands in aid of the construction of the Illinois and Michigan canal, submitted to the consideration of the Legislature the importance of procuring lands along the line of the public works, to be enhanced in value by their construction. In accordance with the suggestion of the committee, authority was given by the internal improvement law, to the Commissioners of the Public Works to enter lands along the routes of the several works. The memorable revulsion in the fiscal affairs of the commercial world which shortly afterwards ensued, and the difficulty which subsequently existed in obtaining the description of funds receivable in the land office, tended to frustrate, in a good degree, this design of the Legislature. Entries, however, have been made, to some extent, by the Commissioners; and your committee entertain the belief that if a special fund, say of $1,000,000, could be set apart by the present Legislature for the purpose of being vested in lands near the line of the public works, and in securing important town sites along the routes, and the works should afterwards be properly located, with a view to State interests, the profits on this fund so invested would be sufficient to meet any deficit in the payment of interest on loans, and create a sinking fund sufficient to reimburse the original investments.

Your committee flatter themselves that the calculations they have made in regard to the profits and dividends on loans and bank stock will not be considered extravagant. And if they can be as successful in demonstrating the probable accuracy of their calculations in reference to the revenue to be derived from the works themselves, they will have done all that can be necessary to satisfy the most prudent that no apprehensions need be entertained of burdensome taxation.

In prosecuting the inquiry into the probable revenue to arrise from the public works, the committee have to assume data which is general in its character, but which they believe is within reasonable and tenable limits.

The railroad being commenced at the navigable rivers on the borders of the State, and extended into the interior, cannot fail to commence doing a limited business as far as completed; and both the amount and profits of this business must rapidly increase with the extension of the lines. During the years 1839, 1840, and 1841, at least 300 miles of the railroads, together with some important river improvements, should be completed. These river sections of the railroads will run through the most populous and improved portions of the State, and have their termini at important trading towns.

The committee have assumed, in their calculations, that up to the first of January, 1842, when the sum of $7,000,000 will have been expended on the public works, the nett receipts for tolls and water-rents will have been only $60,000. It is supposed that this estimate is within reasonable bounds, and cannot be objected to; and the ratio of increase of one per cent. on the expenditures made two years previous to the date of calculations is considered equally tenable.

Your committee propose to take the railroad from Springfield via Jacksonville as a basis of calculation for the probable revenue to be derived from the river sections of the unfinished lines. It is presumed that this road may be completed and in operation by the spring of 1840.

But before entering into this calculation they will take occasion to call the attention of the House to one road in the western country that bears a strict analogy to the river sections of our railroad system. The road referred to is in the State of Michigan, extending from the city of Detroit into the interior to Ypsilanti. This work, about thirty miles long, has recently been put into operation, and is said to be one of the most profitable in the United States, yeilding about $80,000 in ten months' operations, or at the rate of about $3,200 per mile per year.

Your committee regret exceedingly their inability to furnish the official information in detail in reference to it; but they will state that the information they have received, and as stated above, is from such an unquestionable source as to justify them in embodying it in this report.

Your committee will also take this occasion to express their opinion that these river sections of our railroad system admit of no comparison with those detached divisions of the canals of Pennsylvania which hang as an incubus on their system. These detached portions of her great system are constructed parallel with, and on the immediate banks of, the Delaware, and the North and West branches of the Susquehanna. They form no continuous lines of communication, without transhipment, to great commercial marts; and they have been so frequently and so seriously interrupted by the breaking of the feeder-dams, in spring freshets, and by other casualties, that the upper country do not depend on them, and the descending trade, therefore, seeks a market in the old and ordinary modes of transit.

The Springfield and Jacksonville road, with the Naples branch, is about 60 miles in length, and will cost $600,000; to which may be added

$50,000 for the necessary machinery and motive power to put it into full operation. The committee assume the following for the probable daily business on the road, viz:

20 passengers in each direction, at 6 cents per mile, or $3 60 - - - - - - - -	$144 00
20 tons of imports and exports in each direction, at 5 cents per mile per ton - - - - - -	120 00
United States' mail - - - - -	25 00
	289 00
Deduct for repairs, superintendence, labor, motive power, and wear and tear of machinery, $1·31 per day, equivalent to $655 per mile per year - - -	131 00
Nett profit per day - - - - - -	158 00

Calculating 300 days in the year, the annual income would be $47,400, and for half the year 1840, and up to the 1st of January, 1842, $71,100, being $11,100 more than is allowed by the committee for the nett revenue from the whole of the public works in operation up to that time.

The tonnage, of 40 tons per day on this road, amounts to 12,000 tons per annum; and it is incumbent on the committee to examine whether this is or is not an extravagant calculation.

The committee have not been so fortunate as to have at their disposal any definite statistical account of the imports and exports of the interesting portion of the State penetrated by the above work; but having at their command the following statement of the exports and imports of Galena, for the year 1838, they will submit that as data from which inference may be drawn of the probable amount of tonnage on the road in question.

The exports of Galena and its vicinity, in 1838, are stated to be—in lead - - - - - - - 8,000 tons.

The imports may be derived from the number of steamboat arrivals from below, which were 228 boats, averaging 100 tons each—making - 22,800 tons.

Of this amount, there were the following, viz:

6,000 barrels of flour, or 600 tons		
3,000 barrels of pork, or 500 tons		
	1,100	
		21,700 tons.
Total imports and exports (provisions excepted) -		29,700 tons.

From the above statement, it appears that upwards of 20,000 tons of merchandize and foreign articles of use and consumption are necessary to supply the demands of the country depending on the town of Galena. Should this calculation be approximately correct, it is presumed that the estimate of 12,000 tons of exports and imports on 60 miles of railroad, traversing a country so well improved and densely populated as is that on the route of this road, and which produces a large surplus of the heavy staples of the country, is by no means exorbitant.

Leaving the above line of work, the committee will proceed to take a view of the fiscal ability of the whole system, and will then close this branch of their investigation.

In pursuing this subject, it is proper to regard the geographical position of our State, in relation to the grand and extensive systems of improvements in progress, or in contemplation, in other States in the Union, in order to arrive at some data by which to calculate the prospective foreign trade and commerce upon our public works.

The State of Illinois occupies a very central position on the map of the United States, and embraces a greater extent of latitude than any other State in the Union. All the great projected lines of overland communication from the seaboard to the Mississippi river concentrate north of the Ohio, and, from our geographical position, must cross our territory.

The great Southern railroad from Charleston to Cincinnati and Louisville has its most southerly terminus on the Ohio river, near one hundred miles north of the southern extremity of Illinois, and twenty-five miles south of St. Louis. All the more northerly routes from Virginia, Maryland, Pennsylvania, and New York to the Mississippi river, must necessarily pass between the Ohio river and the southerly bend of lake Michigan, and consequently traverse the entire breadth of our State.

It is a well known fact, acknowledged in the public documents of the respective States, that New York and Pennsylvania have long been competitors for the trade of the northwestern States; and they have lavished their millions on public works, in this grand rivalship. The works of Maryland and Virginia excited little fears from either Pennsylvania or New York, until within a few years. The developments of railroad operations have demonstrated the fact that this species of improvements are better calculated to accommodate the commercial community than canals. The observation and foresight of New York could not sleep over this fact, and there was at once projected a railway from their commercial emporium to the western lakes, having a southerly termination, with a view of its ultimate extension into the bosom of the western States.

No sooner was this project of New York set on foot, than Pennsylvania projected an extension of her Philadelphia and Susquehanna railroad to lake Erie; and more recently, a project has been suggested of constructing a continuous line of railroad from Philadelphia to St. Louis.

Whilst New York, Pennsylvania, Maryland, and Virginia were thus engaged in constructing works of internal improvements to secure to their respective Atlantic emporiums the trade and travel of the great western valley, a new and common rival to them all has recently sprung up. This formidable rival is the great Southern railroad from Charleston to Cincinnati and Louisville.

When this work was first projected, like many other important improvements with which the age abounds, it was considered exceedingly chimerical by many. Some giant minds of the sanguine south grasped the project, with a firm conviction of its practicability and usefulness; and no doubts are now entertained of its completion within a few years. It has been found, from the actual surveys of the line, that the Alleghany chain can be crossed by this road at one-half the elevation that presents

barriers to the Virginia, Maryland, and Pennsylvania routes, and that the grades upon the road are comparatively light; and of course the transportation on them will be less expensive than on either of the other routes. The line from Louisville to Charleston is the shortest route by which the Ohio and the ocean can be connected.

This route is 340 miles nearer than by New York, 240 miles nearer than by Philadelphia, 40 miles nearer than by Baltimore, and 170 miles nearer than by Mobile. The city of Charleston is within a short distance of the ocean, and accessible at all seasons of the year. This railroad is controlled by men of the first talents and enterprise of the age; and from the liberal banking privileges granted the company by several of the States through which the line of their work is carried, their means are ample. Eight millions of capital have been subscribed. During the severest depression in the money market of Europe and this country which has been known for many years, the company was able to negotiate a loan of two millions of dollars in London, within the space of ten days; and their agent returned with the money in the same vessel that carried him out. One hundred and twenty-eight miles of the road from Charleston westerly is expected to be completed during the present year, and one hundred and ten miles more will be placed under contract.

That New York and Pennsylvania will look patiently and inactively at the efforts making by their great southern rival is not to be expected. It would be to desert all their former designs and plans of political economy, for which millions have been liberally expended, and for which they are just commencing to reap their rewards. It is not to be supposed that any thing short of a continuous and uninterrupted line of communication from the seaboard to the great father of waters will satisfy their enterprise. Pennsylvania has peculiar encouragements to embark in railroads. Her 132 miles of railroads yielded during the last year, five hundred and forty-three thousand seven hundred and fifteen dollars, while her 591 miles of canals yielded but four hundred and fifteen thousand six hundred and thirty-one dollars.

Your committee have alluded to this state of things abroad, to direct attention to the part that Illinois, at no distant day, is destined to take in these grand designs, and to the incalculable benefits which she cannot fail to derive from them, by a timely and judicious legislation on her part.

What amount of travel and tonnage the concentrated lines of internal communication from the Atlantic seaboard to the Mississippi river may throw across our territory, and over our public works, no one can now conjecture. An immense territory stretches beyond our western border, which, at present, is comparatively uninhabited by the white man; but, if like causes continue to produce like results, a slight retrospection of the progress of the settlements of the territory northwest of the Ohio, during the last quarter of a century, will be sufficient to indicate what advantages our public works may derive from the settlement of this vast domain.

Your committee unfortunately have not been able to procure the data to arrive at the present imports and exports of Illinois. They find

that the arrivals at Chicago amount at least to 400 annually. If 150 tons be taken as the average of each, it will be -	60,000 tons
The steamboat arrivals of the Illinois may be assumed to be 300 annually, which, at an average of 120 tons, will give - - - - - - -	36,000
Of the Wabash, 200 arrivals, at 120 tons each (half to Illinois,) - - - - - - -	12,000
Transhipped at Louisville and Evansville - -	10,000
Of the Ohio, say - - - - -	12,000
Transhipped at St. Louis, for Illinois, say - -	20,000
Ports in Illinois, on the Mississippi river, at Chester, Alton, Grafton, Quincy, Warsaw, Galena, &c., say	60,000
Total - - - - - -	210,000

The whole number of steamboats navigating the waters of the Mississippi and its tributaries is estimated at about 400; averaging these at 200 tons per boat, and each boat making 20 trips per year, it would give the whole tonnage carried by steamboats in one direction at 1,600,000 tons. If this estimate is approximately correct, the above estimate of 210,000 tons for the State of Illinois is not more than a fair proportion of this total amount.

The exports of the State cannot be accurately stated, for the want of the proper statistical information—and your committee must again resort to data of a general character. The Wabash and its tributaries drain a country about equal to one-third of the State of Illinois. It is pretty well ascertained that a season of tolerable crops sends out of that river at lesst 3,000 flatboats, averaging 60 tons each, making a total of 180,000 tons.

The superior facilities of making farms, which a prairie offers over a heavily timbered country, will enable the population of Illinois, very early, to arrive at that point which will afford the greatest exportation the soil is capable of producing. From this view of the subject, and of the data drawn from the exports of the Wabash valley, your committee believe that, by the time the railroads are in operation in Illinois, the exports will not fall short of 350,000 tons.

To determine whether or not this amount of tonnage would not be an exorbitant remuneration for the labor of a population of 800,000, which it is presumed will inhabit Illinois in 1846, your committee will institute an inquiry into the probable value of the amount of exports.

The staple productions of Illinois, and which will always form the bulk of her exports, are, wheat, flour, corn, pork, beef, tobacco and lead. Taking these six articles of exports, their average value may be ascertained near enough for the present purpose, as follows, viz:

1. Wheat or flour, per ton - - -		$50 00
2. Corn, per ton - - - -		15 00
3. Pork, per ton - - - -		75 00
4. Beef, per ton - - - -		65 00
5. Tobacco, per ton - - - -		80 00
6. Lead, per ton - - - -		75 00
	6	360 00
Average value, per ton - - -		$60 00

The above amount of exportation—350,000 tons assumed as the maximum for the whole State of Illinois in 1846, would, at $60 per ton, amount to $21,000,000

The western district of the State of New York, although still increasing in population, sends down the Erie canal an annual export of twenty millions of dollars, consisting principally of agricultural products. Hence, an amount of $21,000,000 of exports for this State in 1846, cannot, in view of this fact, be considered an extravagant estimate.

What portion of the imports or exports of the State will probably pass over our public works, is another question of primary importance to be determined, in order to arrive at the probable revenue to be derived from this source.

One great argument urged in favor of our present system of internal improvements is, that by concentrating all the works at the mouth of the Ohio, every portion of our State can send off her products at the season of the year when there is the least competition in the southern market. That this valuable feature in the system of the public works of Illinois will tend to induce an immense amount of transportation, which would otherwise float upon the rivers to market, there can exist no doubt. In addition to this, it is to be considered that the timber, suitable for the construction of flatboats, is gradually disappearing in the interior with the settlement of the country. On the other hand, when the produce reaches the mouth of the Ohio, it will then find uninterrupted means of transit to the lower market in steamboats, and in large and capacious flatboats which will have performed the service of transporting salt from the Upper Ohio, for the supply of the interior of Illinois, and the country drained by the Upper Mississippi and its tributaries. Independent of these considerations, it will be borne in mind that a large portion of the exports will be produced in the interior of the State, and must find its way to the navigable rivers, on every road in the system, to seek a market; so that it is reasonable to estimate that full one-half of the total imports and exports of the State will pass over the railroad lines.

Another important item of tonnage should not be lost sight of in estimating the probable revenue of the roads. The interior of Illinois will require an immense quantity of fencing and building lumber, that must be transported from the rivers to the prairies, to supply this demand. This lumber will come from lake Michigan, the Upper Mississippi, the Wabash and the Ohio; so that almost, if not all, the roads in the system will command more or less of this important trade.

From the foregoing views of the prospective trade, in which our public works are destined to participate, your committee have made out the following estimate of the probable revenue to be derived from the whole system when completed.

The lowest estimate which the committee have been able to make for the amount of the foreign and local travel and transportation on the railroads, is 25 persons per day in each direction, and 20 tons of imports and exports, in each direction, for 300 days in the year—the total length of the roads being 1,342 miles.

25 passengers in each direction, on 1,342 miles, for 300 days, at 5 cents per mile,		$1,006,500
20 tons in each direction, at 5 cents per mile, per ton,		805,200
1,342 miles of daily mails, at $125 per mile, per year,		167,750
Water rents and tolls on river improvements,		50,000
Total,		$2,029,450
Deduct expenses:		
Interest on $14,000,000	$840,000	
Motive power, superintendents, repairs, laborers, and wear and tear of machinery, $655 per mile, on 1,342 miles,	878,010	
		1,718,010
Yearly balance,		$311,440

By averaging the rate of speed of the above transportation at 80 miles per day, the quantity of tonnage, necessary to give the above amount of tolls, will be 200,000 tons per annum.

The above estimated annual receipts on the railroads would be at the rate of $1,475 per mile.

The Ohio canal, 333 miles long, in 1838, paid $1,093 per mile, with between eight and nine months' operation.

The Pennsylvania canal between Philadelphia and Pittsburgh, (which suffered from an extensive breach during the last year,) yielded only about $1,000 per mile.

The New York canals in 1836, after reducing her tolls, to compete successfully with the Pennsylvania lines, and having various railroads in their country to take off the travel from the canal, yielded $2,000 per mile nett profit, after deducting expenses of collection, maintenance, and repairs.

The Pennsylvania railroad, 132 miles in length, and the motive power thereon, paid in 1838, $4,119 per mile. The portion of the last named works between Philadelphia and Columbia, 82 miles long, paid in 1838, after deducting the maintenance of the motive power thereon, and defraying the cost of supervision and repairs, $210,393, or $2,567 per mile, equivalent to seven per cent. on the total cost of this work.

In view of these results on other similar works, your committee entertain the belief that their estimate of the gross receipts on the railroads of Illinois, at $1,475 per mile per annum, is sufficiently reasonable.

In connection with the subject of the probable amount of business and profits on the railroad system of Illinois, it should be borne in mind, that the works of internal improvements in other States have, for the most part, greatly exceeded in first cost, per mile, those projected in Illinois. Large expenditures of money have been made on comparatively short lines of work: and the tolls being charged by the mile, the ratio between the amount of business and actual re-

ceipts on the one hand, and the per centage on the costs of the work on the other, is very great. A railroad or canal of the same length, and costing $40,000 per mile, would have to command four times the amount of business, to nett the same per centage as would a road costing but $10,000 per mile; admitting the wear and tear, the motive power, supervision and contingent expenses to be the same in both cases. But this cannot be; for as the amount of business is increased on the road, the contingent expenses of every description advance in proportion, so that the road costing $40,000 per mile must necessarily do at least five times the amount of business that would be required of a road costing but $10,000 per mile, to pay the same per centage on the capital invested in their construction, the tolls being the same. Moreover, the money expended on roads of cheap construction will extend them much further over the country, accommodate a greater number of people and interests, and command a much larger local trade.

Take, for instance, the Philadelphia and Columbia railroad above referred to. This line of work is eighty-two miles long, and cost near three and one quarter millions of dollars, or near $40,000 per mile. This road commands the local trade and travel of only 82 miles of country. Whereas this sum, expended in the construction of railroads over the open and comparatively level prairies of Illinois, would command the local trade and travel of upwards of 300 miles of country, and diffuse its equal benefits to four times the population that a road, costing $40,000 per mile, would do.

The foregoing are the estimates of the probable revenue to be derived from the railroads, as predicated on the ordinary rates of tolls charged on similar works in other States. On most of these works, and especially on those in the several States competing for the commerce of the West, the rates of tolls are, and always must be, kept down by that competition. But the works of Illinois will not have to contend with any such competition; and the whole of the works being under the control of the State, it will be within her power to regulate the tolls to meet the exigencies of the revenue and expenses. A discriminating toll can be charged on different species of transportation; the exports of her products can be protected, and a revenue raised from the imports, and from the foreign commerce and travel which it may be the interest of the citizens of other States to give to our public works; and, generally, to regulate the whole rates of tolls, so as to sustain the system. And it is believed by your committee, that a much higher rate of tolls may be charged, if necessary to produce a revenue, than their calculations exhibit; and the works will still afford an immense saving to the people of the State, and at the same time preserve a successful competition with all other modes of transportation and travel.

There is another view in regard to the probable revenue of the works, which your committee will notice.

The whole system, as at present arranged, enables every part to contribute to the support and success of the whole. If there should be any of the branches of doubtful utility in a fiscal point of view, when separately considered, yet the travel and transportation generated by these lateral roads, when accumulated on the main lines and passing over them, will constitute the direct and legitimate means of rendering the whole system profitable. This state of things is said to exist in reference to the canal system of New York. The lateral or branch canals, considered separately and apart from the whole, do not yield a revenue sufficient to pay the interest on the costs of their construction; and it is said the main line would not be profitable without them; yet, when the whole is taken together, it forms one of the most profitable systems of public works in this or any other country. The reason of this is obvious. The main line accommodates, comparatively, but a limited portion of country, but when the arms or lateral branches are thrown out into an extensive region of country, they generate

a commerce for the main stem that would not otherwise pass over it, and this additional trade, combined with that of the main line, forms a mighty mass of business, and renders the whole system immensely productive and profitable.

In regard to the profits to be derived from the transportation of the United States mails, your committee entertain the opinion that their estimate is extremely reasonable. It cannot be otherwise than that several most important mail routes must be established across our State: and their importance must yearly increase with the settlement of the great western country beyond the Mississippi. And the route from north to south must, from the nature of things, be of immense importance so soon as the communication is once opened from the northern States and Territories to the mouth of the Ohio; and thence, by uninterrupted steamboat navigation, to the great commercial emporium of the Mississippi valley. The mails of the United States *must* be carried on these important routes, or every particle of its business will be anticipated, and consequently destroyed, by the expedition of the railroad communications. Then there would be no other alternative than for the Government to pay for the transportation of her mails, on these expeditious lines of communication, any reasonable compensation the State might demand. The price per mile, of $125, as estimated by the committee, very little exceeds the amount paid for daily mails on the common roads, at the ordinaty speed; and it will scarcely be questioned that this estimate is within all reasonable limits.

The committee have thus attempted to demonstrate the existence of a sufficient amount of transportation and travel in the State to sustain, by its tolls, the public works, when they are put into full operation. They will close this branch of their investigation, by giving the following statistical exhibits of the extent, costs, and actual business of some of the principal works in the United States; which exhibits, your committee believe, may be useful in the examination of this important subject.

Abstract of the Boats that have passed, and Tolls received on the Louisville and Portland Canal, from 1831 *to* 1837.

Year.	Number of Steamboats.	Flat and Keelboats.	Tons.	Amount received for tolls.
1831	406	421	76,323	$12,750 77
1832	453	179	70,109	25,756 12
1833	875	710	169,885	60,736 92
1834	938	623	162,000	61,848 17
1835	1,256	355	200,413	80,165 24
1836	1,182	260	182,220	88,343 23
1837	1,501	165	242,374	145,424 69
	6,611	2,713	1,103,324	475,025 14

Length and cost of several improvements in other States, and the amount of tolls received on each in 1837, *taken from official documents.*

Designation.	Length in miles	Total cost.	Cost per mile.	Tolls in 1837.
New York canals,	655	$11,962,711	$18,264	$1,293,129
Pennsylvania State canals and railroads,	709½	18,830,625	26,541	975,350
Ohio canals,	406	5,356,150	13,192	355,166
Lehigh navigation,	46¾	1,546,095	33,071	149,267
Schuykill navigation,	108	3,187,383	29,513	604,189

Statement of tolls collected upon the State Canals of New York, Pennsylvania, Ohio, and upon the Schuylkill navigation in Pennsylvania, from 1818 *to* 1837.

Years.	New York.	Pennsylvania.	Ohio.	Schuylkill navigation.
1818	–	–	–	$233
1819	–	–	–	1,203
1820	$5,437	–	–	803
1821	14,388	–	–	1,792
1822	64,072	–	–	1,054
1823	152,958	–	–	1,964
1824	340,761	–	–	635
1825	566,112	–	–	15,775
1826	762,003	–	–	43,108
1827	859,058	–	–	58,149
1828	838,444	–	–	87,171
1829	813,137	–	–	120,039
1830	1,056,922	$27,012	–	148,165
1831	1,223,801	38,241	–	134,005
1832	1,229,483	56,909	–	264,829
1833	1,463,715	151,419	$181,954	325,486
1834	1,339,799	309,789	210,018	299,841
1835	1,548,972	674,357	232,894	433,643
1836	1,614,680	837,805	257,925	522,633
1837	1,293,129	975,350	355,166	604,189

NOTE.—The tolls on the New York works have undergone a gradual eduction for several of the last years; and the receipts were reduced, n 1837, by accidental causes.

Another question of importance is, whether the railroads will possess the ability to command the travel and transportation which may exist in the State, and to compete successfully for it with other means of transit.

So far as it regards the abilities of the railroads to secure the travel and light transportation, the committee deem it unnecessary to trouble the House with an argument in detail on the subject. The peculiar adaptation of railways for the conveyance of passengers and light transportation is so well understood that little need be said in support of it. If any elucidation in support of this position was required, the committee think that the mention of the fact that a proposition to construct a railway from New York to Albany—which project is now about being put into execution—would be sufficient. This road will be constructed by private enterprise, for the purpose of yielding a profit to its owners, and at a cost of about $40,000 per mile. It will run parallel with one of the finest rivers in the continent, and which is as well supplied with commodious, safe, and expeditious steamboat accommodations, as any other in the world; and perhaps on no line of communication, of equal extent, is the price of travelling so cheap as it is on that river. Other instances of a similar character might be referred to; but the committee deem this sufficient for their present purpose.

Perhaps in no country, or in any age, or to any people, was the axiom, "*that time is money*," more applicable than to the people of the United States at the present day. Comparatively speaking, there are few of our citizens possessed of large and overgrown estates, and therefore men of leisure; but on the contrary, the great mass of our people are depending on their own active exertions, industry and enterprise. Despatch and speed, in every ramification of the business of life, are almost the very condition of their existence. The improvements in the means of conveyance, and the astonishing annihilation of time and space produced by them within the last few years, so far from satisfying the travelling community, has only tended to incite an increased desire for greater rapidity of movement. This is so obviously correct that the steamboat of the greatest speed is almost universally preferred, even at the risk of life itself. To the commercial community, which forms the great mass of travel, it is of advantage, in every point of view, to perform their journies and voyages with the greatest practicable expedition; and hence, that mode both of travel and transportation which offers the greatest certainty and speed, and liable to the least casualities and delays, will always be preferred. So long, then, as this disposition to embrace the safest and most expeditious means of conveyance continues, there can be no reasonable doubt entertained of the capatity of our railroads to compete with all other modes of travel, for the transportation of passengers travelling in the direction of any of their routes.

In addition to the ordinary travel of the country that always seeks the public conveyances, the railroads will induce an immense amount of local travel, which would not otherwise exist, or be performed by means of private conveyances. Even before the introduction of railroads in England, it had become a saying "*that a man could not afford to walk.*" Such were the facility and cheapness of conveyance afforded

by their numerous and splendid canals, that the extra time consumed, and the expense of performing a journey on foot, cost more than the fare on the canals. So it might be said in Illinois, if her railways were in operation, "that a man could not afford to ride in his own conveyance;" for the time and actual expenses he would save by travelling on the railways, over and above the cost of performing the journey in his own conveyance, would, in most instances, make it his interest and induce him to prefer the former.

A journey of 100 miles on horseback for the purpose of transacting business at Alton, Chicago, St. Louis, or any other place, would require three days' travel in each direction, making six days' expense for man and horse, at $1 per day, is - - - - - $6 00

2 days' time and expenses of horse whilst attending to the business of the journey, 75 cents - - -		1 50
6 days' time of man and horse, at $1 50 - - -		9 00
		$.6 50
By railroad—fare 200 miles -	$10 00	
1 days' time on the journey in each direction $1 - - -	2 00	
2 meals on the journey - -	1 00	
		13 00
		$3 50

Making three dollars and fifty cents in favor of the railway conveyance, by putting the expenses of the journey on horseback, (which is the cheapest mode of private conveyance) at the lowest rates, and valuing the time of the person at the small sum of one dollar per day. If these views of the subject be correct, there cannot exist a doubt of the entire ability of the railroads to come into the most successful competition for a large share of the travel of the country.

The last inquiry the committee design to institute into the financial abilities and business capacities of the railroads, is in reference to the tonnage which it has been shown will exist in the State at the time of their completion.

The minimum average rate of transportation, on our common roads, is not less than $1 per hundred pounds per hundred miles, or per ton - - - - - - $20 00

The ordinary rates of toll and transportation on railways being 5 cents per mile per ton, for one hundred miles, is	5 00
Balance in favor of railroads - - -	$15 00

Thus, at the lowest possible rates that a common team, during the season of the best roads, can perform the transportation, there would be a clear saving of money of $15 per ton, besides the advantage of the superior speed, certainty, and safety of the railway conveyance.

The staple productions of Illinois must, for the most part, be exceedingly bulky, and for this reason they will not bear transportation on common roads from the interior to the rivers; which they might do on the railways.

Take, for instance, the article of corn, which is the cheapest of all our productions compared with its tonnage, and it will be found that even this article would bear transportation, on the railways, from the extreme interior to the rivers. From an inspection of the map, it will be seen that, if the present system of railroads is carried out, the roads will bring most portions of the interior of the State within 70 or 80 miles of some navigable stream.

Then the transportation of one ton of corn, or 34 bushels, a distance of 80 miles, at the rate of five cents per ton per mile, would be,

per ton - - - - -	$1 00
or per bushel - - - - -	11⅛

The cost of transportation, for a distance of 80 miles, of a bushel of wheat, is - - -	11
Of 100 pounds of tobacco - - -	20
Of 1 barrel of pork or beef - - -	60
Of 1 barrel of flour - - - -	40
Of 1 bushel of salt - - - -	10

And all other articles of produce and consumption in the same proportion.

The cost of the transportation of pork and beef on the common roads forces the counties in the interior of the State to resort to driving the animals to the trading towns on the river, for slaughter. The expense, loss of time, loss in the weight of the animals, and other obvious disadvantages occasioned by this mode of going to market, could very readily be shown to exceed the cost of carrying the salt into the interior on the railroads, and of transporting thereon the beef, pork, and bacon after it is cured and packed. All experience has shown that, as fast as the means of cheap transportation is extended into the interior of a country, commercial establishments spring up along their lines; capital comes in, and competition in trade, the life of business in all countries, is excited. The producer then finds a ready market, comparatively at his own door, for his surplus produce, and at as high a price as he could obtain in the city or large trading town at the termini of the road or canal; deducting only the bare costs of transportation. He thus avoids the loss of time, and escapes the risks and vexation of seeking a foreign, and perhaps glutted market, for his produce. He is enabled thereby to concentrate his energies and attention to his domestic concerns, and avoids the loss and derangement of affairs incident to being withdrawn from home. Moreover, it most frequently happens that the common roads of the country are in the worst condition, at the very season of the year when the farmer is most at leisure with his teams; and it is not unlikely, also, to happen that the market may be most favorable at the very time when his domestic engagements are the most pressing on his hands.

And it is believed that the railroads of Illinois, by being brought into operation at so early a day, will not very materially affect any settled interests of the people. In the older States, where the transportation had, for a long series of years, been performed by the ordinary teams of the country, there had grown up immense individual interests, with which the sudden introduction of the public improvements did, for a time, injuriously conflict. But, in this State, no very extensive preparations

have yet been made in reference to the carrying trade of the interior; and what capital shall have been invested in teams and wagons can be transferred to the purchase and improvement of real estate, and brought into the most useful of all applications—the cultivation of the soil. And it is thought that agricultural pursuits, with a ready and certain market, will be the most profitable, as they are the most honorable, in Illinois.

Under all these considerations, and numerous others that might be alluded to, it can scarcely be doubted that it will be the interest of the agricultural portion of the community, either directly or indirectly, to give their business of transportation to the railroads; and that there is every just reason to believe that the railroads will be resorted to for the purpose of transporting the great mass of the exports as well as the imports of the State.

Your committee have thus endeavored to show that the prospective revenue of the State, and of the public works, will be sufficient to carry on, complete, and sustain the system, without the necessity of resorting to burdensome taxation on the people; and that as this and the neighboring States and Territories increase in population and improvements, the works must, from the geographical position of the State, and the prospective business on them, yield a handsome revenue. But it is not with the sole prospect of revenue that a system of public works should be undertaken by the State. There is a higher standard by which their value should be estimated. If this system should be calculated to induce an immense influx of industrious and enterprising emigrants to our borders—to cause the wide and beautiful domains of this State to teem with population, and to be filled with improvements—if property shall be advanced in value—if incalculable savings to an industrious people, in time and in the costs of the transportation of imports and exports, should result from it—if information of the state of markets and general intelligence should be constantly kept up and widely diffused amongst the people by means of the railroads—if social intercourse and domestic happiness, should be promoted by means of the safe and rapid transit of absent relatives and friends—if an immense loss in human life and of property, yearly occurring by steamboat accidents on our rivers, should be avoided—if the reputation of the State should be advanced at home and abroad—and if numerous other benefits which the system promises should be realized from it—then your committee believe that all these considerations should likewise enter into the account when the calculations of the advantages and disadvantages of the system are made; and that they should go far to remove the objections of its opponents, and to determine its real value to the State.

The present is emphatically an age of improvements; and their onward march is a theme of the deepest interest to the philanthropist and statesman. The country or community that folds its arms and stands still, amidst the general progress of improvements that pervade the world, will soon be left behind, to regret that want of foresight that impelled their successful competitors on to greatness.

The astonishing applications of science to the arts of life, within the last few years, have either produced, or they have been the effect of a moral revolution in the civilized world. During the close of the 18th, and the commencement of the 19th century, the energies and productive usefulness of a large proportion of the male population of Europe were wasted in wars. Almost countless millions were expended; and an incalculable destruction of human life, at its season of greatest activity and usefulness was thus occasioned. No relict of this vast expenditure of life and money was left to benefit posterity and add to the common stock of human happiness. But on the contrary, distress and ruin, and pauperism hung as an incubus on the industry of the succeeding generation.

The continued peace of Europe, for the last quarter of a century, has removed the checks on population and productive industry which had prevailed for a long preceding period. The immediate consequence of this State of things is, that the arts of peace have been more extensively cultivated; population has rapidly increased; and by the economy of machinery, the products of human labor and invention have been astonishingly augmented.

Although the United States, during the wars of Europe, enjoyed the neutral carrying trade of the belligerant nations, by which great profits were derived; yet it is not difficult to perceive that this country has been recently more extensively benefitted by the pacific relations of the Old World.

The producing classes of society, in a time of peace, are constantly on the increase, and the savings of their labor form the substantial capital of all countries. These savings of the peaceful labors of Europe are continually tending to amass an amount of surplus capital, which cannot find employment there. Notwithstanding extended and costly projects of internal improvements, in Great Brittain and on the continent of Europe, have recently been undertaken and prosecuted; yet labor and capital are still abundant; and money increases faster than investments can be made. New and varied schemes for the promotion of human happiness are daily springing up; and are scarcely projected, before we hear of their completion. What were the prophetic phantoms of yesterday are the sober realities of to-day; so rapid is the transition from design to execution. Yet, with all this apparent demand for capital, money in Europe is extremely abundant and cheap.

Perhaps there never has been a period, since the time that Columbus presented the trophies of his discoveries at the feet of his sovereigns, to the present time, that the American continent was regarded with more interest by the commercial States of Europe. The trade and friendship of the United States are universally desired, and our credit, as a people, stands high and unimpeached. The securities of the States, and of incorporations, are held by capitalists abroad to an immense amount, and still the bonds of the American States are in demand, and in high repute.

The object of your committee in this apparent digression from their subject, is to direct attention to the causes which have produced the present general condition of the money market; and for the purpose of showing the probability of there being no disappointment in obtaining loans to carry on the public works. The committee believe these causes to be

permanent, and will continue to be immensely productive of surplus capital so long as they continue to operate. And they believe, too, that the only limit of the credit of the State will be found in an injudicious application of her funds to a wasteful expenditure on works of costly construction, for embellishment rather than utility. But so long as a judicious economy is persevered in, and useful works of internal improvement are being extended to develope the resources of the remotest regions of the State, and to accommodate and enrich the people, and bring into active operation all the latent elements of wealth with which our State abounds, her credit will never suffer in the estimation of intelligent capitalists.

In the judgment of your committee, the State has nothing to dread, but every thing to encourage her in prosecuting, with becoming vigor, the great enterprise before her.

In commencing a system of public works, the State of Illinois marks out no new and untrodden path. She has before her the bright examples of many of her sister States, and all the benefit of their experience. But like them, too, she must expect to encounter discouragements. She must contend with the opposition of acknowledged opponents, and the dispondency of friends. The wisest heads and the purest hearts were found honestly arrayed against the policy of a Clinton in projecting and executing the great canal system of New York. Some of the most useful and profitable public works in this country date the darkest period of their whole history on the very eve of the bright developments of their true value. For instance, a portion of the original projectors of the Lehigh canal became discouraged, and sold out their interest at a loss, just before the stock arrived at its present high value. It is a matter of notoriety, also, that the Louisville and Portland Canal Company were solicitous, until recently, that Congress should take the work off their hands as a National work, apprehending it would become burdensome. But now the stock of the company is valuable.

So the estimates made of the probable value and practicability of public works, and of the great improvements of the age, have generally been underrated by their projectors and advocates. In one of the early estimates of the probable tonnage of the Schuylkill canal, in Pennsylvania, is found "ten thousand bushels of coal per year." Yet this canal, in 1837, sent down 523,000 *tons* of this article, and the amount is annually on the increase.

Within the last five years, one of the most scientific engineers and writers on the use and power of steam-engines in England, ventured an opinion, before a committee of the British Parliament, unfavorable to the practicability of the steam navigation of the Atlantic. Yet we now see the fallacy of this opinion; and now can feel the State pride to witness the inventions of a Fulton successfully applied in expediting the commerce of the world. And perhaps the day is not far distant when the vessels, laden at the docks of Liverpool, will discharge their cargoes at the mouth of the Ohio.

Your committee are fully aware that serious apprehensions are felt by many ardent friends of internal improvement, that the system adopted in Illinois is too large for the means of the State. But, in the judgment of the committee, it should be regarded in view of its aggregate

cost, and not as to its extent in miles. For if the peculiar adaptation of the face of our State to the construction of roads renders it practicable to construct a greater extent of improvements for the same sum of money than would be required for a much more limited extent in other countries, it forms an additional argument in favor of the system.

One of the highest calculations made by the opponents of the system of its probable cost, is $20,000,000; which sum will be due and payable after the year 1870. If the value of the aggregate property in the State, in the year 1856, should be 300,000,000 of which there can be no doubt, then 6⅔ cents on a dollar would liquidate the whole debt, at that time, in one single payment. That a much greater proportion of the value of this property than at the rate of 6⅔ cents to the dollar, or its one-fifteenth part, will have been produced by the construction of the works, your committee think will not be questioned. Then where are to be found the ruinous and disastrous consequences of the system, which some apprehend? All seem to admit the propriety of establishing some system of internal improvements; and if this is really admitted, where is the citizen who would object to pledging not exceeding 6⅔ cents on the dollar to secure the capital necessary to carry out such a system? A person who would borrow a sum not exceeding one-fifteenth of his estate, to be expended in the improvement of the remaining fourteen-fifteenths, could not justly be charged with imprudence in the ordinary transactions of life. Then who will recoil at the idea of leaving this debt of 6⅔ cents to the dollar for posterity to liquidate?

But in the event of the prosecution of the system under the provisions of the present laws, the internal improvement debt, that we shall hand down to posterity, will not be payable until after the year 1870.

In legislating for the people on whom the payment of this debt will devolve, it unquestionable is wisdom to endeavor to keep in view their probable condition and resources to meet these liabilities. In doing this, we can only judge of the future by the past. Near one century will then have elapsed since the day that gave birth to the political existence of the mighty empire of States, amongst which, Illinois must then stand a conspicuous member. When that eventful day dawned on this continent it found only a few weak and oppressed colonies, clustered along the Atlantic shore. All the vast region that stretched out to the west, and especially the tract of country which now forms the northwestern States and Territories, and which is destined soon to become the granary of the Republic, was then a wild and uncultivated wilderness. Powerful and warlike tribes of savages peopled this vast domain; and over the beautiful prairies of Illinois, there roamed, in countless herds, the elk and buffalo.

It is easy to pursue the retrospect of the past; but what sanguine temperament will dare attempt to describe the contrast that a century will have produced on this continent? Who will venture an estimate of the number of independent freemen in Illinois, that will hail the first centennial anniversary of American freedom? Where will then be found, on the fertile plains of our State, the least remaining vestige of the Indian's sepulchre that the white man's plough will have spared? What

transformations in the humble cabins of the enterprising pioneer, to stately dwellings, will then have been made? What temples dedicated to religion, to science, and to humanity, will then have been erected? And who will now measure the gratitude of that posterity to those whose foresight and liberal legislation started their favored Illinois, in the morning of her political existence, on the high road to prosperity, civilization, and refinement, in company with her sister States?

Entertaining the foregoing views, your committee have come to the conclusions expressed in the propositions stated in the beginning of this report, and which are respectfully submitted to the House for their consideration.

LETTER

OF THE

PRESIDENT OF THE BOARD OF PUBLIC WORKS,

RELATIVE

To the appointment of an agent to purchase iron.

February 19, 1839.
Read, and referred to the Committee on Finance.

Internal Improvement Office, *Feb.* 1839.

To the Hon. the Speaker
of the House of Representatives of the State of Illinois.

Sir: The Board of Public Works, in answer to a resolution of said House, calling for information "whether any agent had been appointed by the Board to purchase railroad iron, &c.," beg leave to state that Mr. Peck, Commissioner of the Board of Public Works for the seventh judicial circuit, was appointed agent of this Board, as will be seen by a copy of an order hereto annexed, marked A.

By reference to an extract from the report of Mr. Peck, made to the Board in June, 1838, (a copy of which is hereto annexed, marked B,) it will be seen what was done under said appointment by said agent. No other instructions were given except those contained in said order. A copy of the contract mentioned in the said report is herewith sent, marked C.

The President of the Board furnished to said Peck fifteen hundred dollars to pay all the necessary expenses in said mission; which sum the Board has been informed has been credited to the President by the Fund Commissioners upon the return of the receipt of the said Peck to their office.

Under an expectation that this account would be settled with the President of the Board, Mr. Peck was not called upon till to-day for a statement of the account, which he furnished, and is as follows, viz:

STATE OF ILLINOIS, to E. PECK, *Dr.*

To stage and steamboat fare from Chicago to New York, Philadelphia and Baltimore, and back to Chicago -	$131 75
To way expenses on said journey - - - -	165 00
66 days' per diem at $5 - - - - -	330 00
	$626 75

Credit.

By cash received - - - - -	$1,500 00

The balance of the sum unexpended on the mission as above has been disbursed by me as Commissioner of the Board of Public Works, for which I am prepared to account.

E. PECK.

A.

On motion of Mr. McConnel,

Resolved, That Ebenezer Peck, a member of this Board, be appointed a general agent of this Board, and of the State of Illinois, to proceed, in the name of the Board and of the State, to contract for all the railroad iron that may be needed for all the railroads in said State that may be put under contract for the coming six months, in the State of Illinois; and that he be authorized to negotiate for said iron, by receiving proposals or otherwise.

B.

"As the agent of the Board, the undersigned visited several of the eastern cities for the purpose of negotiating for the purchase of railroad iron. The success of his efforts will appear by the accompanying agreement, signed by Messrs. Boorman, Johnston & Co.

"At the time of making of this arrangement, a majority of the Board of Fund Commissioners were at New York, and it was agreed between us that they should make the necessary arrangements for paying the parties who were to furnish the iron; but I am informed that, owing to some differences of opinion between the Fund Commissioners and the contracting parties, no arrangement for the payment of the cost of the iron has been effected. It will therefore remain for the Board to take action upon the subject."

C.

New York, *April* 24, 1838.

Ebenezer Peck, Esq.

One of the Commissioners of the Board of Public Works.

Sir: We understand you wish to make arrangements for purchasing in England, and importing to New Orleans, for account of the State of Illinois, the necessary railroad iron, splicing-plates, and spikes or nails, for two hundred and thirty-six miles of railroad single track; and that the said iron is to be of the usual best kind of iron used for the purpose of railroads, and the flat bars to be two inches and the fourth of an inch in width, and five-eighths of an inch in thickness, to be manufactured with bevel or scarf joinings, with holes to receive spikes nine-sixteenths of an inch in diameter, well and sufficiently counter-sunk for the reception of the spike heads; the bars to be perforated at each end and at intervals not exceeding fifteen inches asunder.

That you wish the execution of the order to be commenced as soon as practicable, and the whole quantity to be shipped from Liverpool or Wales by the 31st December, 1839.

The iron to be shipped for New Orleans consigned to order, and bills of lading to be handed by us to such agent as you may direct. Each shipment made, to contain, as nearly as convenient, the proper relative proportion of bars, plates, and nails.

On satisfactory arrangements being made with us for payment, which we understand you leave to be done by the Funding Commissioners of your State, we are willing to undertake the execution of this order, and to engage that the same shall be duly contracted for in England, and shipped on similar terms and conditions on which we are now executing an order for your State, under an agreement with Chas. Oakley, Esq. These are:—

1st. We will transmit the needful orders to our correspondent in Liverpool, to contract for the iron to be delivered on board ship in Wales or Liverpool, (as may be found most advantageous,) and to procure freightage for the same to New Orleans; and *on condition that no risk or responsibility attaches to the State till the safe arrival of the iron at New Orleans;* when the amount of cost, with insurance, is to become due in New York, twenty days thereafter, at the current exchange on London at such time.

2d. We engage to employ an agent in Liverpool, who shall manage the business in all respects on the most advantageous terms, at a charge of only *one per cent. on the amount of the contract price for the iron, and two and a half per cent. on the amount of freight* for procuring and hiring vessels, if the iron is shipped from Wales.

3d. Our compensation for transacting the business is to be five per cent. on the amount to be charged and paid on each shipment as the cost of the same is settled.

In respect to the proposed condition of making the contracts subject to inspection of the iron in New Orleans, that is wholly impracticable.

The description given by you is sufficiently definite and explicit; and the condition, that the iron is to be "of the usual best kind used for the purpose of railroads," will give the agent a right to reject any if it does not correspond with the description.

By saying above that this order is undertaken on similar terms and conditions as that now executing, let it be understood that it does not apply to the contract price, which must depend on the state of the market when the order is received in England.

Yours, respectfully,
BOORMAN, JOHNSTON & CO.

All of which is respectfully submitted.

WILLIAM KINNEY,
President Board of Public Works.

WILLIAM PRENTISS,
Secretary Board of Public Works.

REPORT

FROM THE

COMMISSIONERS OF PUBLIC WORKS,

IN REPLY

TO RESOLUTIONS OF THE SENATE AND HOUSE OF REPRESENTATIVES

OF

THE STATE OF ILLINOIS,

TRANSMITTING

ABSTRACTS OF DISBURSEMENTS IN EACH CIRCUIT.

VANDALIA:
WILLIAM WALTERS, Public Printer.
1839.

ABSTRACTS OF DISBURSEMENTS.

In Senate, February 19, 1839.

Laid on the table.—In the House of Representatives, disposed of in the same manner.

Internal Improvement Office,

Vandalia, Illinois, February 13, 183 9.

To the Hon. the Speaker *of the Senate:*

Sir: The Board of Commissioners of Public Works for the State of Illinois, in answer to a resolution adopted by the Senate, calling for information in relation to various subjects connected with the system of internal improvements, beg leave to state that much of the information called for was not in the possession of the Board, but much of which could have been obtained from the Fund Commissioners' office, had it been accessible to the Board. In order to furnish all the information in their possession, the Board herewith submit the report of each individual Commissioner, as comprising a more detailed account of the information required in said resolution, than could have been furnished in any other way. It is with regret that circumstances, not under the control of the Board, prevented their answering said resolution some time since; but the arduous duties, and the delay consequent on sending to distant parts of the State for information, rendered it unavoidable. Therefore, in order that all the information obtained may be immediately communicated, they herewith transmit copies of the report of each member of the Board, as the report of the whole Board, in answer to said resolution. All of which is respectfully submitted.

Respectfully, your obedient servant,

WILLIAM KINNEY,

President Board Public Works.

William Prentiss,

Secretary Board Public Works.

REPORT

OF THE

COMMISSIONER OF THE FIRST JUDICIAL CIRCUIT.

VANDALIA, ILLINOIS, *January* 5, 1839.

To the PRESIDENT
of the Board of Public Works:

The Commissioner of the Board for the first judicial circuit, in answering the several resolutions of the different branches of the Legislature, has come to the conclusion that almost all their inquiries have been answered in the general report of the Board, and the accompanying documents; and to this he refers as a sufficient answer, except in the following, to which he now makes this, as all the additional answer necessary.

As to the number of engineers employed, I can only answer, that the abstract furnished will show the names of each engineer employed, and the sum paid each. This has been under the direction of Mr. Bucklin, principal engineer, to whom I have been in the habit of referring all those matters, as one more likely to know how many persons would be necessary in this service. I have called upon him for a list of the names of engineers and others employed, together with the compensation paid to each; and he has submitted the list hereunto annexed. The prices there mentioned were agreed upon by me with the persons employed, and although the prices appear, and are, comparatively great; yet I made the best bargains I could for the State in agreeing upon those prices. Many of those persons, however, are discharged for the winter; but, if the work goes on, similar services will become necessary in the spring. Those persons have principally been paid up to the last day of November, and, as yet, no further.

In addition to this list, Mr. Hawn has been employed as senior assistant engineer, principally on the Alton and Shelbyville railroad, at $2,000 per annum. Mr. Samuel S. Brooks has also been employed by me, as a general agent in procuring the right of way, and other like services, at a salary of $1,000 per annum; but he has been discharged, and has not been in the employ of the State since November last.

As to myself, I commenced the service of the State as Commissioner a few days after my appointment, and have been engaged every day, and all the time since, and I have charged and received compensation for a greater portion of the time since that day, up to the first day of January, 1839.

It is impossible to state the exact amount of money due to engineers and others up to this date, as expenses are daily accruing; but it has

been my practice to pay constantly, as fast as the expenses were incurred; and consequently the sums now due must be very small. *Agents, I have none.*

As to the names of the persons to whom each sum has been paid, and the items and articles for which paid, I can only say that the law under which I have been acting provides that I should procure proper vouchers for every item of expenditure, and that those vouchers should be presented to and *filed* with the Fund Commissioners. This has been done; the vouchers have all been examined, audited, and approved by those Commissioners, and filed there, and credited to me. I have now no control over them, nor have I by law any access to them; but the members of the Legislature have. Those vouchers are placed in a public office; they give all the information asked for; and to them I refer all persons interested, for all further information on that subject. Yet, to enable the members of the Legislature to have all the information in my power to submit, I have procured an abstract of all the vouchers, which shows the names of the persons to whom money has been paid and the general object of the payment. I have not entered or otherwise purchased any land for the State, except a lot in Jacksonville, for a depot; which was valued by disinterested men; and I paid Joseph Duncan, Esq., one thousand dollars therefor. One office has been built at Jacksonville; depots and other necessary buildings are in progress at Meredosia, Jacksonville, and at a point half way between Jacksonville and the river. The sums paid for all and each of those buildings will fully appear by reference to the said abstract, and the vouchers on file in the Fund Commissioners' office, and by the estimate of the engineers made thereon, also on file in the proper office.

In answer to the inquiry about what items are included under the head of contingent expenses, I can only say that I have no such items of expenses; and that by reference to the papers on file in the proper office, it will fully appear for what every dollar in money disbursed by me has been paid.

In answer to the inquiry, "whether any one in the employ of the State have become contractors," I will barely remark that it is not precisely understood what is intended to be asked; but if the inquiry is intended to be made, whether any Commissioner or engineer has taken a contract, while in the employ of the State, I can only answer, I know of no such case.

I find an inquiry, "whether any Commissioner or engineer has purchased land or town property within five miles of any railroad, while in the pay of the State." This appears to be an imputation against the honesty and integrity of the Commissioner and engineers engaged in the location of the several roads, and a charge of having violated the 47th section of the Internal Improvement law; for which violation heavy penalties are inflicted. I have no objection to answer this or any other question that may be asked; and in answer to this, I can state that I know of no case, in my circuit, where the provisions of that law have been violated, either by the Commissioner or engineers. I have had no scrip, nor purchased any land, except as aforesaid.

In relation to the inquiry with respect to the right of way, the law requires that all title papers, and all evidences of title to land, shall be

filed in the Auditor's office; after which the Commissioner has no control over them; and in every instance where I have procured the right of way, evidence thereof has been filed in said office; to which I refer for all the necessary information. This evidence will show the description and quantity of land released, and the full amount paid in each case.

As to the number of cases now pending in the different courts, in relation to the right of way, as the law does not require that I should be notified of appeals by the owners of the land, and as I have no list of cases here, it is not in my power fully to answer this inquiry; but by going to the different county seats, I can procure the necessary information; from my present recollection, however, there cannot be more than six cases now pending.

As to the question, "whether I have paid money to the members of the Legislature," I will barely remark that the abstract submitted shows to whom the money has been paid; and hence the means are furnished the House whereby they may determine this question; but, so far as I am informed at present, I have not paid to any person any money for any kind of service, since the election of the members of the present General Assembly, except to Mr. Hardin for the right of way, as stated in my report; a copy of which is transmitted to the General Assembly.

I have thus answered all in my power that by those resolutions I am requested to answer at present; yet, if any thing remains unanswered, I am ready to supply the same, if possible.

Copy of communication from James M. Bucklin, in relation to Engineers.

Engineers and other persons in the service of the State in the Western District.	Compensation.
Wm. Pollock, senior assistant engineer	$2,000 per annum.
W. S. Wilkinson, junior assistant engineer	2 50 per day and found.
E. Mtodrianowski, do.	do.
John E. Killaly, do.	do.
W. Watson, do.	do.
John Von Horn, do.	do.
Wm. G. Murray, do.	do.
Francis McConnel, do.	do.
Napoleon Kosciatowski, do.	do.
Tonis Bristol, do.	do.
Benjamin O'Rear, leveller and rodman	45 per month and found.
John E. Tolfen, chainman and inspector of timber for superstructure	30 do.
Patrick O'Brien, axeman	20 do.
Martin S. Wilkinson, rodman	30 do.
Joab Wilkinson, axeman	20 do.
Wm. Wier, rodman	30 do.
J. Chapman, chainman	20 do.
Thomas Pollock, axeman	20 do.
John Dunn, rodman	30 do.
S. Bennett, axeman	20 do.
W. Craighead, rodman	30 do.
Pekin and Bloomington branch.	
George McLeod, junior assistant engineer	2 50 per day and found.
Jesse A. Nason, rodman	30 per month and found.
James M. Bucklin, as principal engineer of the Western District, receives a salary of	3,000

MURRAY McCONNEL,
Commissioner Board Public Works.

ABSTRACTS of vouchers returned by Murray M'Connel, Commissioner of the Board of Public Works.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1837.	No. 1.—*Abstract of vouchers for May*, 1837.		
	To cash paid—		
May 8	B. Warren, for 1 wagon and 2 horses	1	$250 00
8	M. A. Chinn, for expenses of hands	2	100 00
8	William Miller, for horse, boarding hands and horses	3	72 00
8	J. M'Calestin, for flour and candles for camp	4	11 75
8	Wm. Finch, for boarding Cutler, rodman	5	3 00
16	E. S. Litton, for S. B. Morgan, for hire and keeping horse	6	8 25
18	B. F. Weeks, for expenses of himself and hands	7	2 25
23	O. S Wood, for State map for office	8	4 00
27	J. M. Bucklin, chief engineer, towards salary	9	323 65
31	J Ballard, for provisions for hands	10	25 00
31	Charles Pollock, engineer	11	10 00
31	Commissioner, as per bill rendered	12	563 10
			$1,373 00
	No. 2.—*Abstract of vouchers for June*, 1837.		
	To cash paid—		
June 8	Milton M'Connel, for horse	1	$75 00
9	M'Farland & Galbrith, for sundries, per bill	2	10 12
10	John Hedenberg, as per voucher (service)	3	21 38
10	G. S. Crook, "	4	16 13
10	Thomas Collins, for service	5	21 38
10	Freeman Leech, "	6	16 00
10	S. B. Morgan, keeping horse	7	8 00
10	E. H. James, bagging	8	37 10
10	Palmer, Rice & Milner, supplies	9	17 13
10	James Love, services	10	18 86
10	B. F. Oscar, "	11	21 38
10	Wm. Miller, "	12	21 38
10	Newton Cloud, "	13	20 00
10	M. A. Chinn, camp supplies	14	26 50
13	Wm. Williams, for services	16	14 68¾
13	Wm. Williams, "	17	12 62
21	John P. True, "	20	20 00
21	Martin Masters, "	21	20 00
22	J. S. Anderson, table, &c.	22	5 25
24	Michael Lin, withdrawn, per voucher	25	50
29	Coffman & Henderson, bacon	30	13 63
27	Brooks, Curran & Day, printing advertisements	31	18 00
27	T. S. Barton, sundry articles	32	10 50
29	Alfred Moore, axeman	33	10 00
29	Freeman Leech, "	34	8 00
29	B. F. Weeks, service in engineering party	35	19 37
29	Wm. Hobbs, assistant cook	36	8 00
29	Charles Horden, assistant leveller	37	10 10
29	Thomas Collins, chainman	38	10 10
29	James Dickens, axeman	39	12 80
29	J. B. Thomas, compass man and leveller	40	136 00
29	William Miller, chainman	41	10 10
29	Robert H. Shinaer, compass man	42	10 10
30	James Love, for services	43	5 00
30	Cole & Miller, chains	44	8 50
30	Palmer, Rice & Milner, coffee, sugar, and tea,	45	10 06
30	Same, do do	46	2 74
30	E. H. James, soap, candles, &c.	47	1 48
30	Same, butter, eggs, &c.	48	65
30	J. M. Bucklin, engineer	49	40 00
			$747 85

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1837.	No. 3.—*Abstract of vouchers for July*, 1837.		
	To cash paid—		
July 1	Newton Cloud, salary as clerk	1	$50 00
1	A. W. Cutter, rodman	2	10 00
1	Thomas Beachman, cook	3	10 00
1	J. G. Israel, flour,	4	3 00
1	Robert Gaddis, chainman	5	20 00
1	Thomas Collins, buffalo robes	6	5 00
1	Samuel Giltner, bacon	7	10 87
1	Jeremiah Ballard, expenses of engineering party	8	31 65
1	Jeremiah Ballard, wagon and team hire	9	100 00
1	Frederick Hauze, leveller	10	20 00
4	Charnock Eades, painting rods, targets, &c.	11	3 50
5	Palmer, Rice and Milner, cheese	11	50
15	Bazanth, for corn and milk	13	50
15	J. V. Handenberg, blank books	14	2 50
15	J. & G. A. Dunlap, flour	15	16 00
15	Chinn & Love, camp supplies	16	28 30
15	M. A. Chinn, salary	17	115 59
15	Thomas Beacham, level bearer	18	5 12½
15	J. M. Bucklin, chief engineer	19	144 50
6	E. H. James & Co., vinegar and cheese	20	50
6	M. A Chinn, engineer, salary	21	100 00
8	Berry & Watson, cheese	22	1 12½
8	E. T. Miller, camp poles, tents, &c.	23	11 00
12	Thomas Jones, camp supplies	24	10 00
13	William Pollock, salary	25	50 00
13	James G. Edwards, printing	26	24 50
13	John Woods, leveller	27	136 00
13	E. R. Metcalf, camp furniture	28	6 00
13	Zadock Titus, chainman	29	4 00
13	Robert Gaddis, chainman	30	11 75
15	M. A. Chinn, for services	31	10 00
15	M. A. Chinn, prin. engineer, salary	32	317 93
15	M. A. Chinn, supplies	33	23 62½
17	H. N. & A. B. Murray, sugar	34	50
19	Brooks, Curran & Day, printing	35	18 00
20	E. P. Kellog, bread	36	1 00
21	M. C. Gasher, office furniture, &c.	37	18 75
24	Thomas Beachum, labor	38	33 37½
25	E. Link, butter milk	39	5 88
25	William Curtis, cook	40	13 34
26	J. M. Bucklin, for expenses	41	10 00
28	George Holton, stationery	42	1 88
31	William Pollock, saddles, bridles, &c.	43	133 87½
			$1,520 52
	No. 4.—*Abstract of vouchers for August*, 1837.		
	To cash paid—		
August 1	F. Hawn, assistant engineer	1	$10 50
1	J. M. Bucklin, Engineer, for expenses,	2	200 00
3	Jos. Bogarth, provisions, &c.	3	13 64
10	Colins, Gilberth & Co., do.	4	34 58
10	William G. Scott, board, &c.	5	12 57½
14	John Wood, assistant engineer	6	90 00
15	Rea, Milner & Palmer, stationery	7	9 12½
16	Josiah Muller, blankets, &c.	8	30 96
16	P. M. Lewis, lumber	9	5 22
16	Orlando Kellogg, provisions	10	30 55
17	David Vongandy, damage on corn	11	7 50

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1837.	No. 4—*Continued.*		
	To cash paid—		
August 17	William Bozwell, services engineering	12	$13 00
17	William Brown, for wagon	13	93 00
17	John Wood, assistant engineer	15	48 00
17	Lyman Young, cook	16	16 75
17	B. F. Oscar, vaneman	17	44 68¾
17	Edward Mtodrianowski, assistant engineer	18	246 00
17	William Pollock, senior assistant engineer	19	454 84
17	William Pollock, board, &c. at Scott's	20	44 37½
17	James Love, expenses engineering	21	61 70
17	C. Collins, for horse	22	45 00
18	J. M. Hill, making wagon bows	23	4 00
18	A. W. Cutter, rodman	24	59 33
18	A. Moore, services	25	30 62½
18	J. B. Thomas, assistant engineer	26	150 00
18	J. W. Hadenburg, services	27	46 66
18	F. Hawn, assistant engineer	28	63 00
18	F. Hawn, assistant engineer	29	204 00
18	Charles Hardin, services	30	19 34
18	Charles Hardin, services	31	14 00
18	W. Wilkinson, assistant engineer	32	267 00
18	George W. Maxefield, harness	33	25 00
18	John Dunn, services	34	54 00
18	R. Perry, services	35	26 62½
19	William Pollock, for expenses	36	250 00
19	John Wood, assistant engineer	37	12 00
19	Brooks, Curran & Day, printing	38	20 00
19	William Miller, boarding	39	30 85
21	J. M. Bucklin, salary	40	192 00
21	J. H. Finch, keeping horses	41	34 66
21	Berry & Watson, bacon	42	11 62½
23	Coffman & Henderson, blankets	43	28 12½
23	Frederick Hawn, expenses	44	200 00
25	Newton Forsyth, two black horses	45	250 00
27	F. Haskell & Sons, sugar, coffee, &c.	46	16 00
27	P. Coffman & Co., bacon	47	11 81
31	N. Cloud, clerk	48	165 12
31	J. G. Israel, flour	49	6 00
31	Gilham & Co., hand axe	50	1 62½
31	William C. Scott, boarding	51	43 14
30	Collins & Lodwick, provisions	52	12 43
			$3,760 97
	No. 5.—*Abstract of vouchers for September*, 1837.		
	To cash paid—		
Sept'r 2	James Murray, for labor	1	$20 00
3	James Johnson, bread and crackers	2	7 00
4	William Patterson, painting target, &c.	4	4 75
4	Post office at Jacksonville, for letters	3	4 65
4	George Henry, as per estimate	5	322 87½
10	Brooks, Curran & Day, printing	6	20 00
11	Gillet & Scott, camp materials	7	26 23¾
13	Collins & Lodwick, do	8	22 25
13	John Von Horn, materials for office	9	20 00
13	Lyman Young, labor	10	20 00
17	James Mowrill, camp materials	11	4 00
21	J. S. Anderson, repairing compass case	12	5 50
22	T. S. Barton, smith work	13	15 37½
23	James Agg, services	14	20 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1837.	No. 5—*Continued.*		
	To cash paid—		
Sept'r 25	James Love, wagoner	15	$51 68¾
25	Alfred Moore, services	16	13 28
26	Cordon & Atlerburg, expenses	17	10 00
28	A. L. Casey, cook	18	28 87½
30	Arvill Burhnell, labor	19	21 43¾
30	Salary of Commissioner	20	610 00
30	M. M'Connel, for expenses	21	136 93
30	J. S. Anderson, repairing instruments	22	4 50
			$1,390 05
	No. 6.—*Abstract of vouchers for October*, 1837.		
	To cash paid—		
October 1	J. W. Finch, keeping horse	1	$17 19
3	J. M. Bucklin, engineer, salary	2	750 00
3	J. M'Knight, taking care of horses	3	3 75
3	Peter Turner, labor	4	10 06
4	Mary Ann Murphy, making tents	5	11 50
18	William Killam, services	6	34 28
18	David Vongundy, boarding	7	84 44
18	James Love, services	8	32 94
18	John Von Horn, as engineer, and expenses	9	199 25
18	William Corden, services	10	11 88
18	Josiah Atlebury, services	11	11 88
18	William Pollock, expenses	12	134 00
18	John Wood, assistant engineer	13	145 00
18	January & Co., contractors, per estimate	14	5,097 37½
18	Robert S. Pollock, rodman	15	58 00
20	Von Horn, expenses	16	16 50
20	Hessin & Sawyer, printing	17	23 00
20	Lewis Atlebury, service	18	5 31¼
21	John Henry, timber, &c. for office,	19	465 28
21	T. T. January, lumber	20	142 56¼
21	Prosser & Simms, stationery	21	11 00
23	J. W. Hadenburg, services	22	40 00
25	S. A. Douglass, printing	23	17 25
25	George M. Richards, lumber	24	91 80
25	Gibby Coster, services	25	18 00
26	William Walters, printing	26	31 50
26	John Khin, services	27	12 09
26	G. W. Pate, services	28	17 60
29	Brooks, Curran & Day, printing	29	47 00
30	John Wood, junior assistant engineer	30	40 00
30	James H. Price, services	31	63 00
30	Charles Hardin, services	32	145 00
			$7,788 44
	No. 7.—*Abstract of vouchers for November*, 1837.		
	To cash paid—		
Nov'r 1	Edward Mtodrianowski, assistant engineer	1	$182 50
1	James Wean, services	2	25 19
1	Frederick Hawn, expenses	3	100 00
1	W. Williams, assistant engineer	4	182 50
1	Charles Hardin, assistant engineer	5	40 00
2	Thomas Pollock, services	6	41 80
2	J. Wentworth, printing	7	7 00
3	William Ware, services	8	28 67
3	George Henry, towards office	9	50 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1837.	No. 7—*Continued.*		
	To cash paid—		
Nov'r 4	F. Hawn, salary	10	$100 00
6	Barker & Vanzant, printing	12	23 75
6	George Henry, on contract	11	185 00
12	B. F. Oscar, services and expenses	13	103 81
12	January & Co., lumber and shingles	14	237 28
15	William Pollock, surveying instruments	15	200 00
15	William Pollock, assistant engineer	16	739 80
15	James Love, board and washing	17	14 62½
15	George Henry, work in office	18	800 00
15	January, Dunlap & Co., contractors	19	5,597 84
15	James M'Farland, stoves for office	20	48 00
15	J. M. Bucklin, salary, &c.	21	765 87½
15	J. W. Ormsby & Co., freight and charges on lumber for office	22	147 62½
16	Newton Cloud, for services, &c.	23	336 20½
16	Frederick Hawn, assistant engineer	24	459 06¼
21	John Wentworth, printing	25	6 00
23	M'Connell, Ormsby & Co., shingles, glass, &c. for office	26	244 66
23	J. A. Foushee, assessor of damages	27	13 50
24	Hust & Gass, levelling rod	28	2 50
25	Corbin & Watson, printing	29	18 00
25	James S. Anderson, book case, &c.	30	10 25
27	Thomas J. Locket, services	31	33 20
27	Joseph Henry, boarding hand	32	17 50
27	George Henry, work and materials for office	33	355 13
28	A. W. Cutler, draftsman	34	89 33
28	George Henry, pine lumber, freight, &c.	35	169 12½
28	Gershom Keyes, sundries for camp	36	27 75
28	William B. Warren, sugar	37	5 00
28	Robert Deaton, moving fence	38	19 00
29	M. Leslie, for labor	39	15 00
29	E. A. Mears, assessor	40	19 50
			$11,462 04
	No. 8.—*Abstract of vouchers for December*, 1837		
	To cash paid—		
Decem'r 1	January, Dunlap & Co., contractors	1	$5,270 00
6	J. W. Evans, assessor	2	6 00
25	M'Connel, Ormsby & Co., candles	3	15 37
25	M'Ginis, moving fence	4	9 00
26	James Maxefield, fencing State lots	5	72 00
29	William C. French, assessor	6	6 00
29	Joseph Duncan, land	7	1,000 00
29	J. W. Finch, boarding, &c.	8	57 87½
			$6,324 24
1838.	No. 9.—*Abstract of vouchers for January*, 1838.		
	To cash paid—		
January 1	January, Dunlap & Co., contractors	1	$3,861 69
1	John Dunn, chainman	2	117 53
1	John W. Handenburg, services	3	97 34
1	Edward Markham, moving fence	4	16 00
4	S. S. Brooks, printing	5	71 25
4	M. M'Connel, commissioner's salary	6	460 00
10	J. M. Bucklin, for a press	7	12 00
10	T. S. Barton, blacksmith work	8	8 19
10	M. C. Gasha, tent poles, &c.	9	3 00

ABSTRACTS—Continued.

Date.		Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.		No. 9—*Continued.*		
		To cash paid—		
Jan'y	10	D. B. Ayers, stationery	10	$53 06
	11	Thomas J. Locket, axeman	11	34 40
	11	Harrison & Flatferd, for office	12	5 50
	11	John Lawson, assessor	13	3 00
	11	Cole & Miller, office furniture	14	25 00
	11	Harrison & Flatferd, for office	15	64 12½
	12	John Von Horn, junior assistant engineer	16	222 50
	12	John Von Horn, for use of office	17	35 87
	12	W. S. Wilkinson, junior assistant engineer	18	190 00
	12	Wm. Pollock, stationery, board, &c.	20	52 76
	12	Edward Mtodrianowski, junior assistant engineer	19	190 00
	13	John Green, keeping horse	21	3 00
	13	January & Dunlap, keeping horses	22	16 00
	13	J. W. Hadenburg, services	23	16 00
	13	J. M. Bucklin, fuel	24	12 00
	13	A. F. & C. Wilson, smith work	25	7 50
	15	J. M. Bucklin, salary, &c.	26	1,240 23
		No. 10.—*Abstract of vouchers from 15th of January.*		6,637 95
		To cash paid—		
	20	John Anders, moving fence	27	8 00
	20	John Lazerby, do.	28	22 00
	20	M. M. S. Reed, stationery	29	7 18¾
	22	Newton Cloud, clerk	30	60 00
	22	David Vongandy, boarding	31	61 56
	22	M. C. Van Pelt, laths for office	32	4 00
	22	William Pollock, expenditures	33	40 00
	22	Isaac Chandler, gate for stable	34	3 50
	24	F. Hawn, salary	35	30 00
	24	Rising Dewey, damage on wheat	36	21 00
	24	G. W. Maxefield, assessor	37	9 00
	24	Cor. Ludlaum, do.	38	9 00
	24	Wm. Buckingham do.	39	9 00
	31	January & Dunlap, contractors	40	2,550 00
	31	January & Dunlap, do.	41	7,787 87½
	31	George H. Brocken, repairing wagon	42	2 00
	31	Calhoun, Early & Co., contractors	43	386 32
	31	Same, do.	44	2,483 06
				$13,493 49¾
		No. 11.—*Abstract of vouchers for February*, 1838.		
		To cash paid—		
Feb'y	14	James M'Farland, stove and pipes	1	$16 81
	14	James Johnson, for boarding	2	32 50
	26	Frederick Hawn, assistant engineer	3	216 60
	28	John Dunn, services as a hand	4	20 00
	28	James Post, keeping horses	5	260 46
	28	John Von Horn, assistant engineer	6	42 00
	28	J. M. Bucklin, fuel	7	18 00
	28	Same engineer, salary	8	49 24
	28	January & Dunlap, contractors	9	897 80
	28	Same, "	10	839 80
	28	Frederick Hawn, for boarding hands	11	25 00
	28	Calhoun, Early & Co., contractors,	12	805 00
	28	Same, "	13	451 03
				$3,676 14

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 12.—*Abstract of vouchers for March*, 1838.		
	To cash paid—		
March 9	George Henry, for getting right of way - -	1	$16 50
12	James Johnson, a hand, wages and boarding -	2	28 25
31	E. D Brown, for repairing instruments - -	3	8 50
31	J. M. Bucklin, salary as engineer - -	4	700 76
31	Wm. Pollock, do " - -	5	493 20
31	Wm. Hobbs, a hand in Jacksonville survey -	6	6 00
31	Isham Taylor, a hand in same survey -	7	2 31
31	Frederick Hawn, salary as engineer - -	8	493 20
32	John Dunn, services as a hand in locating -	9	79 00
31	Same, money expended for the State -	10	8 20
31	Edward Mtodrianowski, as engineer - -	11	187 50
31	E. Shotwell, salary as engineer - -	12	30 00
31	T. S. Williams, do. - -	13	125 00
31	John Von Horn, do. - -	14	187 50
31	Newton Cloud, salary as agent and clerk -	15	220 00
31	W. S. Wilkinson, salary as engineer - -	16	187 50
31	James M. Anderson, bill rendered and receipt -	17	37 25
31	Isham Taylor, a hand in Jacksonville survey -	18	5 00
31	Wm. Hobbs, a hand in same service - -	19	3 81
31	January, Dunlap & Co., contractors - -	20	5,609 20
31	M. M'Connel, salary as commissioner - -	21	450 00
31	Samuel S. Brooks, for services as agent - -	22	20 00
31	James Johnson, a hand, for wages and boarding -	23	29 00
31	James Johnson, jr. for horse-keeping for State -	24	84 00
31	Reed & Radford, contractors, for grading -	25	2,195 23
31	Same " timber furnished -	26	1,570 29
31	John S. Killaly, salary as engineer - -	27	127 50
31	Frederick Hawn, for horses sold the State -	28	300 00
31	J. M. Bucklin, for wood furnished office -	29	12 00
31	January & Dunlap, contractors, for grading and timber - - - -	30	2,691 10
31	J. S. Killaly, for boarding and wages of hands and stage fare - - - -	31	46 62
31	G. W. Spotswood, boarding engineers and hands -	32	64 00
31	W. Randall, boarding engineers and hands -	33	75 00
			$16,093 42
	No. 13.—*Abstract of vouchers for April*, 1838.		
	To cash paid—		
April.	James Johnson, for keeping horses, and wood for office - - - - -	1	$36 00
	Theodore Barton, for blacksmith work - -	2	34 62
	J. W. Handenburg, rodman - - -	3	73 33
	J. W. Handenburg, as engineer and for money expended - - - - -	4	88 25
	Samuel C. Black, for stage fare from Springfield to Jacksoville - - - - -	5	3 00
	Benj. Boberts, for incidental expenses in camp engineering - - - - -	7	200 00
	B. Roberts, for stage from Vandalia to Springfield -	6	6 00
	F. Hawn, expenses on Alton & Shelbyville railroad	8	200 00
	Thos. A. Samuels, a hand, amount for boarding -	9	3 00
	J. G. & G. A. Dunlap, blankets for hands -	10	108 00
	George W. Hanley, for painting targets and rods	11	6 25
	Charnock Eades, to painting three target rods -	12	1 50
	George Henry, for making, hanging, and painting window shutters for office - - - -	13	237 18
	E. M. Adams, repairing 2 stage wagons, (new beds) -	14	26 75

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 13—*Continued.*		
	To cash paid—		
April.	E. H. Fitch, for tavern expenses at tavern letting -	15	$5 00
	N. Wade, for tavern expenses at the Quincy do. -	16	6 50
	Davenport & Henderson, moving fence out of Northern Cross road - - -	17	10 00
	James Harkness, for tent linen and target rods -	18	13 00
	Jas. Love, a hand upon the Northern Cross railroad	19	15 00
	Ira Davenport, for a horse for use of engineer -	20	100 00
	Jas. Litton, boarding hands for engineer services -	21	18 75
	Henry Eddy, for boarding engineering hands -	22	4 00
	M. L. Glenn, for printing blank receipts - -	23	4 00
	January & Dunlap, work done on the N. C. railroad -	24	16,038 74
	Reed & Radford, do. " " do. -	25	155 12
	John S. Killaly, for expenses on do. -	27	100 00
	Reed & Radford, for work done on do. -	26	4,085 84
	January & Dunlap, do. do. -	29	6,329 41
	S. S. Brooks, services as ag't to procure right of way -	30	51 23
	John Von Horn, for a goneometer sold, as per Mr. Bucklin, - - - -	31	200 00
	S. S. Brooks, for horse hire for State service -	32	2 00
	James Johnson, wages as a hand and for board -	33	41 00
			$28,203 47
	No. 14.—*Abstract of vouchers for May*, 1838.		
	To cash paid—		
May 1	Joseph Heslop, stage fare of two to Springfield -	1	$6 00
7	Wharton Randal, stage fare from Springfield to Vandalia and to Jacksonville - -	2	15 00
9	Jas. C. Anderson, for work, as per voucher -	3	16 75
12	Charles Collins, for wagon and harness - -	4	150 00
14	William Chapman, for work done - -	5	30 00
14	Simpson Haynes, do. - -	6	7 00
15	James M. Price, for services as rodman - -	8	46 00
15	Nathan Hatfield, for boarding hands - -	7	37 00
19	Andrew M'Kay, for work done - -	9	14 00
18	F. Hawn, for expenses on the Alton and Shelbyville railroad - - - -	10	200 00
15	E. R. Metcalf, services in taking righ of way -	11	3 00
21	Freeman Leach, for services of son one month -	12	20 00
22	Lawrence Von Hagerman, for month's service -	13	20 00
23	Lemuel Hawley, for horse, wagon and harness -	14	160 00
23	J. M. Bucklin, expenses of engineering corps	15	100 00
24	W. C. Scott, for boarding hands 14 weeks -	16	56 00
24	John A. Foushee, for wagon and harness -	17	100 00
19	Same, for postage, &c. - -	18	30 22
19	Collins & Lodwike, for bill of sundries -	19	33 94
26	Loring Moore, for work done - - -	20	22 00
26	James H. Finch, for boarding engineers - -	21	15 50
26	Margaret Keslock, for moving fence - -	22	12 00
26	James H. Finch, for boarding hands, &c. -	23	60 83
27	Isham Taylor, for services - - -	24	14 45
27	Granville Ratliff, for services - - -	25	19 45
28	Mather Waddle, damage done his field - -	26	20 00
29	W. Pollock, for expenses of engineering corps -	27	200 00
26	F. J. Williams, for do. do. " -	28	200 00
28	M'Connel, Ormsby & Co., for amount of bill -	59	2,816 97
28	James Danton, for moving fence - -	30	12 00
31	W. C. Scott, for boarding J. M. Price, 9 weeks -	31	36 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 14—*Continued.*		
	To cash paid—		
May 31	James Litton, for boarding T. Pollock, 16 days -	32	$5 75
31	Samuel S. Brooks, for services as agent, &c. -	33	107 94
31	M. M'Connel, for keeping State horses - -	34	59 00
31	Reed & Radford, work on Northern Cross railroad -	35	5,113 73
31	January & Dunlap, do. do. -	36	37,598 47
31	Charles Oakley, for mathematical instruments -	37	1,834 25
			$49,193 25
	No. 15.—*Abstract of vouchers for June*, 1838.		
	To cash paid—		
June	January & Dunlap, for freight on iron - -	1	$630 35
	Nathan Hatfield, for boarding hands - -	2	24 25
	R. D. Robinson, expenses and services as a hand -	3	18 00
	James Dunlap, freight on iron from Europe -	4	890 85
	Reuben Riggs, right of way, fence, &c. -	5	40 00
	Jas. H. Finch, for boarding hands and engineers -	6	56 63
	A. R. Parker, expenses as engineer west of Illinois -	7	32 06
	H. Twichel, for work done on the Pekin road -	8	2,746 23
	Jacob Carral, a hand with the engineers -	9	3 37
	J. M. Bucklin, for engineering expenses - -	10	100 00
	F. Hawn, for expenses on the Alton road -	11	18 15
	R. D. Robinson, for expenses incurred on business of the State - - -	12	33 28
	F. Hawn, for travelling expenses as engineer -	13	52 50
	Same, expenses on Alton and Shelbyville road -	14	300 00
	E. Shotwell, salary as junior assistant engineer -	15	227 50
	J. & G. A. Dunlap, for blankets for camp -	16	16 30
	S. S. Brooks, for service in procuring right of way -	17	82 19
	F. Leech, for service as a hand with engineers -	18	23 33
	Theodore Barton, for blacksmithing - -	19	27 75
	G. Henry, for timber, &c. for engineer's house -	20	400 00
	J. M. Lawrence, for keeping railroad horses -	21	40 00
	R. T. Robinson, services as a hand and expenses -	22	17 38
	Thos. J. Locket, for services as a railroad hand -	23	63 33
	J. Johnson, wages as a hand, horse keeping and board - - - - -	24	30 00
	J. Johnson, services as a railroad hand -	25	31 22
	James H. Finch, for hands and engineers -	26	59 88
	W. Pollock, for expenses on the Pekin road -	27	200 00
	Same, engineer, for salary to last of June -	28	498 68
	J. M. Lawrence, work as a hand and boarding -	28	28 00
	James L. Lamb, for camp equipage, as per receipts -	29	82 10
	J. S. Killaly, for expenses of engineering hands -	30	50 00
	Same, for salary as engineer - -	31	165 00
	Same, for expenses of engineering party -	32	50 00
	John M. Cabiny, for taking right of way -	33	12 00
	C. R. Mathery, for " " " -	34	12 00
	John S. Killaly, for salary as engineer -	35	227 50
	David Pricket, for taking right of way -	36	12 00
	Thos. E. Lee, for horse hire to Springfield -	37	9 50
	Jas. M. Price, for wages as rodman - -	38	47 00
	Patrick O'Bryan, do do - -	39	65 28
	F. J. Williams, salary as engineer - -	40	227 50
	J. S. Killaly, for expenses of engineering party -	41	50 00
	J. M. Bucklin, salary as principal engineer -	42	720 00
	March & Mathers, for the right of way -	43	315 92
	David Graff, do. do. -	44	324 64

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 15—*Continued.*		
	To cash paid—		
June.	Montgomery Pitnor, for the right of way -	45	$311 65
	Jacob Redding, for do. do. -	46	164 00
	D. & B. Richardson, for do. do. -	47	153 33
	Stephen Green, for do. do. -	48	637 29
	John Green, for do. do. -	49	88 63
	William Hays, for do. do. -	50	259 27
	J. M. Bucklin, for expenses of engineering -	51	100 00
	Joseph Green, for the right of way - -	52	356 63
	Elijah Bacon, for do. do. - -	53	177 00
	Cyrus Eldridge, services as rodman - -	54	55 00
	M. M'Connel, for services as commissioner -	55	455 00
	Richard Dicker, services as a railroad hand -	56	38 66
	John Von Horn, salary as engineer - -	57	227 50
	Same, expenses on the line as engineer -	58	53 04
	James M'Kinney, for the right of way - -	59	100 00
	S. S. Brooks, for expenses taking right of way -	60	10 00
	S. W. Raymond, expenses of engineering party -	61	22 50
	Henry Casteen, for boarding hands - -	62	28 00
	G. P. Howell, for levelling instruments at Quincy -	63	136 50
	A. W. Wood, for expenses of office at do. -	64	42 09
	A. Comstock, for engineer's chain at do. -	65	10 00
	Pay Roll, at Versailles, for money paid engineer and hands - - - -	66	273 00
	Pay Roll at Quincy, for money paid do. do. -	67	213 00
	A. R. Parker, salary for one month as engineer -	68	125 00
	T. Kelly, for work done on the Northern Cross railroad, at Quincy - - -	69	3,216 70
	A. R. Parker for expenses on the line - -	70	500 90
	Amasa R. Parker, for a horse for engineers -	71	90 00
			$16,978 45
	No. 16.—*Abstract of vouchers for July*, 1838.		
	To cash paid—		
July.	W. S. Wilkinson, for expenses as engineer -	1	$38 50
	Edward Mtodrianowski, for salary as engineer -	2	227 20
	Geo. P. Plant, for expenses as do. -	3	22 49
	F. M'Connel, wages as rodman - -	4	66 18
	Geo. P. Plant, wages as engineer - -	5	247 50
	William Hamilton, services as a hand -	6	57 37
	W. S. Wilkinson, salary as engineer, - -	8	227 50
	Fred'k Hawn, do. do. -	9	495 76
	F. J. Williams, expenses as resident engineer -	10	63 05
	A. W. Cutler, as assistant engineer, - -	11	212 50
	Freeman Leach, service as a hand - -	12	13 33
	John M'Elvitt, do. do. - -	13	25 00
	L. V. Hagerman, do. do. - -	14	36 00
	Thomas Ross, do. do. - -	15	46 66
	Thomas Pollock, do. do. - -	16	46 66
	John Doniken, do. do. - -	17	18 66
	James Dunlap, expenses on railroad iron -	18	1,580 99
	Wm. Chapman, services as a hand - -	19	13 20
	James L. James, damage for right of way -	20	200 00
	Wm. C. Scott, for boarding engineers - -	21	22 72
	S. S. Brooks, expenses on the line - -	22	5 75
	Orlando Kellogg, service procuring right of way -	23	3 00
	Jos. Codlington, do. do. do. -	24	3 00
	Charles Kinney, do. do. do. -	25	3 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 16—*Continued.*		
	To cash paid—		
July.	M'Connel, Ormsby & Co. provisions and stationery -	26	$69 17
	Thomas Taylor, boarding engineers, &c. -	27	70 50
	Ezra M. Adams, repairing wagon - -	28	4 25
	J. H. Killaly, service as engineer - -	29	70 00
	David Vongundy, boarding hands and engineers -	30	14 50
	Edw'd Mtodrianowski, amount paid for boarding -	31	52 00
	John Nelsh, for boarding a hand - -	32	10 00
	John K. Rychluke, service as engineer -	35	207 50
	Daniel Graff, for boarding hands - -	36	30 00
	B. F. Oscar, services as rodman - -	37	94 93
	Twitchel & Hunsucker, for work on Pekin road -	38	1,794 35
	William Sellars, for do. -	39	1,424 60
	James S. Anderson, case, &c. for office -	40	23 75
	J. W. Finch, for boarding engineers and hands -	41	59 28
	Samuel S. Brooks, service as agent - -	42	84 93
	Charles G. Scott, work done on Pekin road -	43	335 00
	Daniel Barker, for services as a hand - -	44	20 00
	John M'Lamara, horse keeping and services -	45	76 00
	William C. Stephenson, for right of way -	46	313 31
	John Dunn, for service as rodman - -	48	90 00
	Same, expenses on the route - -	49	12 87
	John B. Watson, service as rodman - -	50	95 13
	Reed & Radford, contractors - -	51	2,683 08
	George Henry, for building engineer's house -	52	664 68
	William Elder, for services as a hand - -	53	50 71
	Samuel Grubb, work on Sangamon bridge -	54	455 60
	Charles Hardin, assistant engineer - -	55	50 00
	Thomas Ross, service as a hand - -	56	11 37
	E. H. & J. L. James, camp equipage, &c. -	58	24 13
			$12,567 96
	Amount of money expended in July, and not allowed.		
	John S. Killaly, $100. Fred'k Hawn, two vouchers, $300 each - - -	–	$700 00
	W. Pollock, two vouchers, for $405 53 and $194 47	–	600 00
	The foregoing sums are found in vouchers numbered 7, 33, 34, 47, and 57, of the return for July, 1838. The engineers' vouchers are returned and all filed in the commissioner's office, and amount to the sum of $1,300.		$1,300 00
	No. 17.—*Abstract of vouchers for August*, 1838		
	To cash paid—		
August.	Joab Wilkinson, wages as a rodman - -	1	$80 00
	Jos. Heslep, stage fare of agent and engineer -	2	3 00
	J. K. Rychluke, engineer, for boarding - -	3	28 00
	R. S. Kneeland, steamboat fare for engineer -	4	6 00
	S. S. Brooks, salary as ag't in procuring right of way	5	84 93
	W. A. Mitchell, wages as a hand - -	6	59 26
	Thomas A. Samuels, same service - -	7	56 76
	Joseph Heslep, boarding hands and engineers -	8	27 00
	James Harkness, repair to office, and a tripod -	9	9 00
	James C. Riggins, wages and boarding as a hand -	10	5 76
	John Gregory, damage allowed him for right of way	11	50 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 17—*Continued.*		
	To cash paid—		
August	J. M. Lucas, for printing Meredosia lettings	12	$4 50
	J. W. Evans, service as an appraiser of right of way	13	12 00
	W. Pollock, salary as senior assistant engineer	14	339 76
	W. Pollock, for money heretofore expended, as per voucher	15	140 95
	R. Bibb, for damage allowed him for right of way	16	100 00
	John S. Killaly, for incidental expenses as engineer	17	3 60
	S. C. Clark, stage fare of State agent, right of way	18	3 00
	P. Edwards, damage allowed by assessor, for do.	19	100 00
	J. Macklimara, wages, boarding, and horse keeping	20	100 00
	F. M'Connel, engineer, for boarding paid him	21	20 00
	Quincy Pay Roll, for the month of July, 1838	22	344 50
	Mount Sterling Pay Roll, do.	23	234 00
	Quincy Pay Roll, for the month of August, 1838	25	243 00
	Mount Sterling Pay Roll, do.	24	317 25
			$3,662 27
	No. 17.—*Abstract of vouchers for September*, 1838.		
	To cash paid—		
Sept'r	Samuel S. Brooks, for incidental expenses	1	$13 00
	January & Dunlap, for charge on locomotive	2	989 95
	Geo. W. Spotswood, boarding hands and engineers	3	279 12
	Collins & Leslie, for the Jacksonville and Naples Railroad Company	4	1,403 18
	M. Eason, procuring right of way as Justice Peace	5	13 06
	John Dunn, rodman, his wages and board	6	72 00
	J. S. Killaly, engineer, his board and salary	7	167 00
	Charles Collins, freight on locomotive and castings from St. Louis	8	285 00
	H. Lyon, damage for right of way, in Sangamon	9	100 00
	Stephen Green, for boarding hands and engineers	10	1 50
	Wm. King, for damage assessed for right of way	11	200 00
	Collins & Leslie, contractors, their estimate for August	12	7,951 33
	H. Eason, Esq. for attending procuring right of way	13	16 80
	Francis G. Murray, engineer, for boarding	14	20 00
	H. Twitchel, contractor, his estimate for August	15	2,802 45
	George R. Weber, advertising lettings at Meredosia and Naples	16	5 00
	Robert L. Pollock, a rodman, towards his wages	17	10 00
	Jesse A. Nason, do. do.	18	10 00
	Nathaniel L. Sewer, wages as a hand	19	43 29
	F. J. Williams, Esq. salary, and for money expended	20	173 30
	Uriah Raplie, for boarding hands and engineers	21	52 00
	F. Hawn, his quarter's salary, ending Sept. 30, 1838	23	500 00
	A. W. Cutler, assistant engineer, towards his salary	24	180 00
	F. Hawn, for money heretofore expended	25	451 33
	J. H. Craighead, rodman, his salary to Sept. 15, 1838	26	124 25
	J. M'Glaughlin, wages, boarding, and horse keeping	27	76 00
	M. M'Connel, salary as commissioner to 30th September, 1838.	28	460 00
	G. W. Berry, for damage assessed for right of way on Northern Cross railroad	29	50 00
	S. S. Brooks, salary for month of September	30	82 19
	Eli Harp, for board of hands and engineers	31	3 92
	M. Stacey, Probate Justice of the Peace, damage for right of way	32	150 00
	Jos. Field, steam engineer, employed by Oakley	33	280 00
	Jas. T. Tilton, damage for right of way	34	60 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 17—*Continued.*		
	To cash paid—		
Sept'r.	Francis G. Murray, for salary as engineer -	35	$230 00
	Henry & Massey, for blacksmith work to wagon -	36	4 12½
	J. M. Bucklin, salary as principal engineer -	37	750 00
	Lewis H. Robinson, wages as steam engineer -	38	198 12
	F. G. Murray, for incidental expenses as engineer -	39	39 54
	Wm. G. Ware, wages as rodman and draftsman -	40	206 75
	Francis M'Connel, board and services as engineer	41	278 78
	E. Mtodrianowski, salary and incidental expenses as engineer - - - -	42	277 96
	Davenport & Henry, contractors, for Sept'r estimate	43	440 00
	Geo. P. Plant, engineer, his salary and expenses -	44	373 43
	Wm. Walters, for printing lettings at Meredosia -	45	4 50
			$22,330 38
	October 1st.—Cash paid G. W. Caruthers, for expenses of Central office, for the months of September, October and November, per his receipt - -	-	$250 00
	No. 18.—*Abstract of vouchers for October*, 1838.		
	To cash paid—		
October.	John S. Killaly, expenses of Springfield office -	2	$205 47
	Same, salary, as junior ass't eng'r for Sept.	3	89 15
	John Dunn, salary, board and expenses of a hand	4	50 15
	M. Eason, fees as a justice, taking right of way -	5	5 00
	Charles Rodgers, wages as a chainman -	6	72 45
	Daniel Waldo, cash paid for boarding hand -	7	2 00
	John Von Horn, services and expenses as engineer	8	256 14
	W. S. Wilkinson, wages and expenses as engineer	9	251 85
	Staley & Phillips, for work done on engineer's house	10	58 50
	James Bazarth, boarding engineers and hands -	11	16 50
	Charles Hardin, services as engineer - -	12	378 75
	William Cloghn, do. - -	13	389 25
	J. M. Price, services, board and expenses, as rodman	14	159 60
	William Chapman, services as a hand - -	15	86 14
	J. W. Handenburg, services as rodman and draftsman	16	215 81
	Robert Pollock, services as rodman - -	17	187 00
	Peter Handenburg, saddlery for engineers -	18	41 50
	Same, services appraising right of way	19	12 00
	J. R. Simms, do. do.	20	9 00
	Daniel Waldo, service as Justice Peace procuring right of way - - - -	21	3 00
	J. H. Finch and others, pay for same services -	22	9 00
	Quincy Pay Roll, - - - -	23	252 00
	Mount Sterling Pay Roll - - -	24	223 25
	Andrew Leger, jr. harness for wagon at Quincy -	25	30 00
	James Oakley, engineer, money paid for boarding	26	8 00
	A. R. Parker, salary and expenses of corps and office at Quincy - - - -	27	352 12
	William Stephenson, boarding engineer corps -	28	30 00
	Thomas Pollock, wages and boarding as a hand -	29	76 20
	Morton Wilkinson, wages as a rodman -	30	146 60
	W. S. Wilkinson, engineer, salary and expenses -	31	65 25
	John E. Talfre, wages and board, as rodman -	32	60 40
	Henry Kesler, wages and board as a hand -	33	37 70
	Samuel S. Brooks, travelling expenses - -	34	16 50
	T. J. Farnham, attorney, fees in 26 cases at Tremont	35	120 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 18—*Continued.*		
	To cash paid—		
October.	Charles Hardin, salary and board as engineer -	36	$47 00
	D. Smedly, for services in appraising right of way -	37	9 00
	Ezra M. Adams, repairing State wagon - -	38	6 50
	Jesse A. Mason, services and board as rodman -	39	115 25
	Geo. M'Leod, salary and board as engineer -	40	82 00
	Same, money paid as expenses of eng'r corps	41	222 89
	H. B. Sampson, boarding engineers and hands, and keeping horses - - - - -	42	225 28
	Francis M'Connel, travelling expenses to Tremont	43	7 44
	Victor Phillippi, wages and board as a hand -	44	62 87
	J. H. Craighead, wages and board as rodman -	45	23 14
	S. Grub, contractor on the Sangamon viaduct -	46	363 80
	J. Von Horn, expenses as engineer - -	47	58 18
	Same, use of his horse for engineer -	48	16 87
	T. J. Locket, boarding and wages as a hand -	49	42 50
	W. Pollock, services and expenses as engineer -	50	487 37
	Victor Phillippi, wages and board as a hand -	51	25 17
	S. S. Brooks, salary as agent, &c - -	52	84 93
	P. O'Brien, wages and board as a hand - -	53	95 80
	N. M. Knapp, for advertising railroad lettings -	54	66 25
	J. M. Tegarden, for putting glass in office windows	55	4 00
	S. W. Raymond, services and board as rodman -	56	40 00
	A. W. Cutler, services as engineer - -	57	125 00
	Clin. Glasson, for washing blankets - -	58	3 87
	M'Clung & Johnson, for right of way - -	59	50 00
	B. F. Glass, for right of way - - -	60	150 00
	L. A. Robinson, salary as steam engineer -	61	255 00
	C. G. Scott, contractor on Pekin road - -	62	850 00
	Simeon Francis, for advertising - -	63	8 25
			$7,444 64
	No. 19.—*Abstract of vouchers for November*, 1838.		
	To cash paid—		
November.	Edward Shotwell, for salary as engineer -	1	$80 00
	F. Hawn, for services as senior assistant engineer -	2	150 00
	J. S. Killaly, for money paid as engineer -	3	49 86
	Same, for salary and board do. - -	4	90 79
	J. Dunn, wages and board as rodman - -	5	43 29
	U. Mann, pay for right of way - -	6	75 00
	J. B. Watson, salary and expenses as engineer -	7	136 37
	G. W. Berry, appraising damages - -	8	4 50
	Nathaniel Ellis, do. - - -	9	4 50
	Fenj. F. Goss, do. - - -	10	4 50
	C. R. Matheny, appraising right of way - -	11	6 00
	E. R. Metcalf, " damages - -	12	4 50
	W. Waddle, expenses horse keeping and wages as a hand - - - - -	13	354 25
	J. A. Cooper, painting 8 large doors for engine house	14	8 00
	H. H. Staley, work done on engine house -	15	55 65
	F. Hawn, money heretofore expended on line -	16	510 82
	John B. Watson, salary, board and expenses as engineer - - - - -	17	159 18
	J. S. Killaly, salary and board as engineer -	18	87 86
	J. H. Craighead, wages and board as rodman -	19	87 15
	J. S. Killaly, cash paid a hand, and for horse keeping	20	42 02
	John Dunn, wages and board as a hand - -	21	42 86
	George Bryan, judgment for damages of right of way	22	1,667 00

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 18—*Continued.*		
	To cash paid—		
November.	N. Bryan, judgment for damages for right of way -	23	$833 00
	Alex. S. Anderson, do. do. -	24	623 00
	J. E. Anderson, do. do. -	25	958 00
	Jas. W. Keyes, appraising right of way - -	26	3 00
	Cabines & Calhoun, do. - -	27	15 00
	W. Randall, stage fare and boarding for engineer -	28	27 12
	Henry Kesler, wages and board as a hand -	29	19 77
	G. M'Leod, salary, board and money p'd as engineer	30	223 55
	W. Sampson, for appraising right of way -	31	6 00
	M. Young, pay for right of way - -	32	112 50
	P. Holmes, do. - - -	33	40 00
	J. P. Nettleton, constable, serv'g notices in right of way	34	30 00
	H. L. Pratt, for right of way - - -	34	76 50
	Abraham Newkirk, damages for right of way, -	35	22 50
	Joseph Newkirk, do. - -	36	112 50
	Benj. Newkirk, do. - -	37	122 00
	John Newkirk, do. - -	28	135 00
	Josiah L. James, do. - -	29	240 00
	John Cline, do. - -	40	162 00
	Lewis J. Hines, do. - -	41	75 00
	James Robinson, do. - -	42	175 00
	Joseph Sawyer, do. - -	43	36 00
	Spencer Field, do. - -	44	150 00
	Oliver Linley, do. - -	45	80 00
	John Hancock, do. - -	46	173 00
	David C. Alexander, do. - -	47	400 00
	Robert Alexander, do. - -	48	300 00
	Coles Thompkins, do. - -	49	100 00
	Vincent Bailey, do. - -	50	125 00
	Philip Flageller, do. - -	51	76 50
	John H. Ball, do. - -	52	50 00
	Same, for right of way over other lands -	53	112 50
	Wm. Ramsey, damages for right of way -	54	157 50
	J. H. Harris, do. - -	55	20 00
	J. O'Brian and others, for appraising damages -	56	63 00
	J. H. Morrison, fees as Justice Peace on right of way	57	60 00
	Jesse A. Nason, services as rodman, - -	58	87 12
	D. B. Ayers & Co., stationery for engineers, -	59	51 24
	E. Dewy, expenses as engineer west of Illinois river	60	15 25
	Same, money paid for expenses on line -	61	23 44
	E. Stone, services in taking right of way -	62	6 75
	J. Haslep, boarding and stage fare for engineer -	63	29 00
	N. M. Knapp, for printing blanks - -	64	19 50
	M. M'Connel, for salary - - -	65	305 00
	F. G. Murray, salary and board as engineer -	66	178 50
	F. M'Connel, do. - -	67	178 50
	J. M. Bucklin, for services as engineer and expenses	68	638 50
	M'Connel, Ormsby & Co., stationery and candles for State - - - -	69	58 98
	F. Hawn, money paid hand on line - -	70	66 00
	Collins & Leslie, their estimate for November, 1838	71	1,764 51
	S. S. Brooks, service as agent procuring right of way	72	82 19
	A. W. Parsons, services upon Illinois river -	73	100 00
	D. Drissinnel, wages and board as a hand -	74	15 00
	J. & G. A. Dunlap, sundries for engineering corps -	75	20 63
	B. F. Oscar, services as rodman and 2 months' board	76	118 50
	January & Dunlap, contractors, estimate on depot	77	1,700 00
	L. Berry, for appraising right of way - -	79	4 40

ABSTRACTS—Continued.

Date.	Names of persons to whom and for what paid.	Vouchers.	Amount.
1838.	No. 19—*Continued.*		
	To cash paid—		
November.	J. S. & R. C. Anderson, for drawing boards for office	78	10 00
	John Hunt, for services as a hand - -	80	15 00
	E. Stephenson, for right of way - -	81	550 00
	W. Pollock, salary as engineer to 30th Nov. 1838 -	82	498 68
	Same, for stationery for office in Tremont -	83	5 75
	J. W. Handenburg, for services as draftsman -	84	106 25
	Napoleon Kosciatowski, do. - -	85	137 75
	W. G. Ware, for services as rodman - -	86	87 12
	J. Von Horn, service as engineer - -	87	94 10
	F. Hawn, for money expended in survey - -	88	328 00
	Same, sen'r ass't eng'r, for salary and expenditures	89	766 29
			$17,640 91
	No. 20.—*Abstract of vouchers for December*, 1838.		
	To cash paid—		
December.	C. Oakley, for railroad iron turnouts, &c -	1	$434 23
	Quincy Pay Roll, for the quarter ending Dec. 1838 -	2	598 00
	W. A. Wood, for expenses of Quincy office -	3	67 51
	J. Cavin, boarding engineers and keeping horses -	4	24 27
	O. F. & G. A. Miller, sundries for Quincy office -	5	38 19
	Holmes & Co., stationery &c. do. -	6	2 63
	A. R. Parker, salary as resident engineer -	7	327 10
	S. D. Hambaugh, boarding hands - -	8	1 50
	A. R. Parker, hire of horse, &c. - -	9	35 00
	Kimball and others, money paid fees for right of way	10	163 00
	John Wood, horse keeping, &c. - -	12	5 50
	J. K. Hillbourn, blacksmithing at Quincy -	13	5 00
	Godfrey, Lowry & Small, for duty &c. on railroad iron	17	2,852 74
	J. Wentworth, charges for printing advertisements -	20	4 50
	M. M'Connel, for salary, December, 1838 -	22	155 00
			$4,713 17
	Alton and Shelbyville Railroad.		
	E. Shotwell, salary as engineer - - -	11	72 50
	Central Railroad.		
	Pay Roll, for the party at Peru, 7th circuit -	14	337 50
	Pay Roll, " south of Peru, locating -	15	376 00
	G. H. Gilson, expenses of Peru office - -	16	152 57
	W. H. Gilman, estimate on Central railroad at Peru	18	1,097 92
	Harkniss & Bigalow, do. - -	19	1,131 41
	H. S. Owens, for right to turn creek from his mills, &c.	21	5,600 00
			$13,481 07

REPORT

OF THE

ACTING COMMISSIONER OF THE SECOND JUDICIAL CIRCUIT.

VANDALIA, ILLINOIS, *January* 1, 1839.

To the BOARD OF PUBLIC WORKS:

GENTLEMEN: I herewith submit to the Board the annexed statement, in answer to the resolutions adopted by each House of the Legislature, in December last, calling on the Board of Commissioners of Public Works for information on various subjects.

With great respect,

Your obedient servant,

WILLIAM KINNEY,

Acting Commissioner Second Judicial Circuit.

DISBURSEMENTS made by William Kinney, Acting Commissioner of the Board of Public Works of the State of Illinois, up to the 1st December, 1838, on the Great Western Mail Route, in the Second Judicial Circuit, including the expense for surveying the whole, and locating the same.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Labor.	Clerk hire.
1837.							
May 30	R. A. Gilpin	–	–	–	–	$51 75	
June 2	Same,	–	–	–	–	210 00	
10	L. Deaver	–	–	$30 00			
10	H. Shaw	–	–	3 62			
10	Chouteau & Barlow	–	–	63 75			
10	Boyle & Co.	–	–	3 50			
10	Tillon & Co.	–	–	3 25			
23	Wm. S. Thomas	–	–	–	–	72 25	
24	Susan Pritchard	–	–	5 00			
27	R. A. Gilpin	–	–	–	$120 00		
July 1	Hill & Co.	–	–	1 25			
3	G. C. Kimber	–	–	62½			$10 00
4	James Shields	–	–	–	–	–	
10	John Thomas	–	–	–	–	40 00	
11	R. A. Gilpin	–	–	–	50 00		
August 16	S. Scott	–	–	6 32			
23	John Thomas	–	–	–	–	396 00	
Sept'r 8	H. Johnson	–	–	35 30			
October 7	N. Green	–	–	5 75			

Nov'r	5	S. S. Brooks, printing	-	-	-	-	75 25		
	22	E. S. Cropley, do.	-	-	-	-	38 50		
	22	R. A. Gilpin	-	-	-	-	-	555 50	
	22	Pay Roll -	-	-	-	-	-	-	188 37½
	20	John Thomas,	-	-	-	1,938 00			
Dec'r	1	J. Wentworth, printing	-	-	-	-	10 00		
	12	Corbin & Watson, do.	-	-	-	-	64 50		
	18	Isaac Demint -	-	-	-	732 08			
	21	John Thomas, jr.	-	-	-	1,348 87			
	21	Winstanley & Duffy	-	-	-	1,250 01			
	21	H. Duffy -	-	-	-	2,063 31			
	21	Parker & Co. -	-	-	-	-	-	4 75	
	30	Hill & Co. -	-	-	-	-	-	1 75	
	30	John Murray -	-	-	-	-	-	-	150 00
	30	—— Stickney, printing	-	-	-	-	21 51		
	30	E. S. Cropley -	-	-	-	-	21 40		
	30	J. C. R. Underwood	-	-	-	-	-	-	224 00
1838.									
Feb'y	17	Isaac Demint -	-	-	-	851 02			
March	30	John Thomas	-	-	-	1,290 30			
April	7	Hugh Duffy -	-	-	-	1,118 38			
	7	Winstanley & Duffy	-	-	-	1,380 80			
	21	John Thomas	-	-	-	920 59			
May	22	Rodgers & Albright	-	-	-	1,051 70			
	31	Groves & Schaffer	-	-	-	835 05			
	31	John Thomas -	-	-	-	2,070 86			
	31	M'Cormick & Brenan	-	-	-	645 00			
	31	T. Dunn & Co.	-	-	-	1,200 00			
	31	John Scheel, salary	-	-	-	-	-	200 00	
	31	Patrick Ryan -	-	-	-	1,821 00			
	31	Winstanley & Duffy	-	-	-	482 55			
	31	Same	-	-	-	1,185 90			
	31	Hugh Duffy -	-	-	-	477 27			
	31	John Scheel, pay roll	-	-	-	-	-	-	38 00
	31	Isaac Demint -	-	-	-	1,825 37			
June	1	Wm. Hessin, printing	-	-	-	-	30 38		
	20	Wadkins & Baine	-	-	-	663 00			
	29	Hugh Duffy -	-	-	-	1,694 04			

DISBURSEMENTS--Continued.—*Western Mail Route.*

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineer's compensation.	Labor.	Clerk hire.
1838.							
June 29	Hugh Duffy,	$523 57					
July 16	Winstanley & Duffy	495 00					
16	Same	975 00					
16	Dunn, Dwin & Co.	2,154 73					
16	Same	795 75					
16	M'Cormick & Brenan	375 00					
16	Same	581 50					
16	John Thomas, jr.	1,500 00					
16	John Scheel	–	–	–	$280 94		
24	S. Baker	–	–	–	–	$10 00	
August 8	Patrick Ryan	1,160 25					
9	John Scheel	–	–	–	102 50		
11	Wadkins & Baine	207 00					
11	Valentine Smith	–	–	–	–	60 00	
11	S. Baker	–	–	–	–	22 25	
11	Groves & Shaffer	796 45					
11	John Scheel	–	–	–	125 00		
21	Dunn, Dwin & Co.	468 75					
Sept'r 7	Joseph Kelley	–	–	–	–	4 62½	
10	J. M'Cracken, printing	–	$8 50				
22	John Thomas, jr.	1,836 00					
Oct'r 15	M'Cormick & Brenan	1,413 00					

	24	Wadkins & Baine - - -	2,438 34						
	24	Patrick Ryan - - -	2,069 60½						
	26	Dunn, Dwinn & Co. - - -	2,525 62½						
	27	John Thomas, jr. - - -	2,646 65						
	29	John Scheel, pay roll - - -	–	–	–	–	153 50		
	29	Same - - -	–	–	–	304 00			
Nov'r	27	Hinkley & Co., plank - - -	–	23 80					
	30	M'Cormick & Brenan - - -	1,330 87½						
	30	Dunn, Dwin & Co. - - -	1,427 82						
	30	John Scheel - - -	–		–	–	90 00		
Oct'r	26	E. Smith, for disbursements - - -	–	200 00					
Nov'r	22	Same - - -	–	400 00					
	30	Same - - -	–	1,000 00					
Dec.	30	J. C. R. Underwood, disbursed - -	–	312 41					
June	6	Right of way - - -	–	120 00					
			52,567 35½	2,268 25	165 06½	1,737 40	1,710 74½		10 00
Dec'r	5	Groves & Schaffer - - -	1,004 70						

***DISBURSEMENTS** made by William Kinney, Acting Commissioner of the Board of Public Works of the State of Illinois, up-to the 1st of December, 1838, chargeable to general expenditure account.*

Date.	To whom paid.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments and stationery.	Labor.	Clerk hire and expenses.
1837.								
April 21	Turnbull, stationery	–	–	–	–	$61 50		
May 12	William Moore, agent	–	–	–	–	–	$50 00	
17	Same	–	–	–	–	–	10 00	
31	R. K. Fleming, printing	$8 50	–	–	–	–	–	
June 5	Buckland, for instruments	–	–	–	–	1,750 00	–	
5	G. W. Carruthers	–	–	–	–	–	–	$292 04
6	Same	–	–	–	–	–	–	574 27
6	Turney, agent	–	–	–	–	–	79 00	
11	Turnbull, stationery	–	–	–	–	75	–	
27	James Shields	–	–	–	–	–	–	100 00
July 1	William Moore, agent	–	–	–	–	–	60 00	
1	A. W. Snyder, agent	40 00	–	–	–	–	–	
21	G. W. Carruthers	–	–	–	–	–	–	250 00
August 25	Thomas H. Kimber	–	$26 90	–	–	–	–	
30	S. B. Meech	–	–	–	–	4 00	–	
Sept'r 13	Same	–	–	–	–	6 00	–	
16	Storage and drayage	2 25	–	–	–	–	–	
16	Parker Adams	–	–	–	–	–	5 00	
30	Whiteside, for wood	3 00	–	–	–	–	–	
Oct'r 9	N. & A. Green	–	6 50	–	–	–	–	
Dec'r 12	E. Peck	–	–	–	$1,500 00	–	–	
12	G. W. Curruthers	–	–	–	–	–	–	533 94
12	Flanagan & Krafft	–	129 56	–	–	–	–	
15	Edward Smith	–	–	$235 70	–	–	–	

	15	William F. Beach	-	-	-	-	-	235 00				
	23	Walter Terrell	-	-	-	-	-	1,166 66				
	23	William Kinney, horse	-	-	-	150 00						
	23	Edward Smith	-	-	-	-	-	663 57				
	28	M'Clintock & Hughes	-	-	-	-	8 75					
	28	Thomas Reynolds	-	-	-	-	2 12½					
	28	B. J. West	-	-	-	-	11 25					
	28	J. Mitchell, postage	-	-	-	8 70½						
	28	N Pensoneau	-	-	-	-	37 25					
	28	James Shields	-	-	-	-	-	-	-	-	-	640 00
	28	Stationery for office	-	-	-	-	-	-	-	6 62½	-	
	30	Hinkley, for coal	-	-	-	11 20						
1838.												
Febr'y	18	William Walters, printing	-	-	-	400 00						
	18	Peter Stohr	-	-	-	-	-	-	-	-	2 50	
	25	Whitesides, for wood	-	-	-	9 00						
	28	William C. Kinney	-	-	-	-	-	-	-	-	-	109 00
	28	N. Pensoneau	-	-	-	61 82						
	28	Thomas H. Kimber	-	-	-	-	-	-	-	11 50		
	28	William Kinney	-	-	-	325 50						
March	8	G. W. Carruthers	-	-	-	-	-	-	-	-	-	283 15½
	27	Edward Smith	-	-	-	-	-	300 00				
	30	M'Farland & Reed	-	-	-	-	38 75					
	30	R. K. Fleming, printing	-	-	-	12 75						
April	1	John Scheel	-	-	-	-	-	150 00				
	7	Henry Johnson	-	-	-	-	-	-	-	-	-	100 00
	9	P. B. Fouke	-	-	-	3 00						
	28	James Gibbons	-	-	-	2 75						
May	2	Edward Smith	-	-	-	-	-	200 00				
	18	Mitchel & Engleman	-	-	-	-	-	-	-	10 94		
	31	William C. Kinney	-	-	-	-	-	-	43 00			
	31	N. Pensoneau	-	-	-	-	-	-	-	15 06½		
	31	B. J. West	-	-	-	-	-	-	-	293 52		
	31	James Mitchell, postage	-	-	-	37 07½						
	31	H. Johnson	-	-	-	-	-	-	20 00		-	100 00
	31	William Kinney, account	-	-	-	313 25						
June	7	William Walters, printing	-	-	-	142 70						
	7	Edward Smith	-	-	-	-	-	1,000 00				

DISBURSEMENTS—Continued.

Date.	To whom paid.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments and stationery.	Labor.	Clerk hire and office expenses.
1838.								
June 8	John Wentworth, printing	$33 75						
11	M'Farland & Reed	-	$7 87½					
8	G. W. Carruthers	-	-	-	-	-	-	$433 00
8	Wm. Walters, printing	214 80						
8	Alexander Furguson	5 00						
July 16	Z. Craine, hire of wagon	-	-	-	$8 00			
16	A. Smith & Co., for printing	25 00						
16	Walter Terrell	-	-	$833 34				
16	William Kinney, horse	-	-	-	155 00			
16	Henry Johnson	-	-	-	20 00	-	-	90 00
23	Charles Rhynier	-	-	-	-	$160 00		
August 9	Mitchell & Engleman	-	-	-	-	15 90		
11	R. K. Fleming, printing	36 50						
11	Henry Johnson	-	-	-	-	-	-	45 00
13	G. W. Carruthers	-	-	-	-	-	-	250 00
Sept'r 21	Fouke & Morgan	-	-	-	5 00			
21	Thomas Watson, printing	10 00						
28	J. C. Bruner, agent	-	-	-	-	-	$175 00	
29	Henry Johnson	-	-	-	20 00			
29	William Abbot, oxen	-	-	-	77 50			
October 1	John Philips, oxen	-	-	-	65 00			
1	Valentine Smith	-	-	-	-	-	111 25	
1	John W. Johnson, oxen	-	-	-	65 00			
1	Cropley & Fleming, printing	5 00						
29	John Thomas, corn	-	14 00					

29	Cropley, printing	-	-	-	43 37					
29	Flanagan & West	-	-	-	-	200 56				
29	B. J. West	-	-	-	-	-	-	-	2 25	
29	W. C. Kinney	-	-	-	-	-	-	-	-	200 00
29	Samuel Brooke	-	-	-	-	-	100 00			
29	Henry Johnson	-	-	-	-	-	-	40 00	-	100 00
29	G. W. Carruthers	-	-	-	-	-	-	-	-	100 00
Nov'r 3	H. S. Hart, printer	-	-	-	40 75					
3	T. H. Kimber	-	-	-	-	10 50				
17	J. C. Bruner	-	-	-	-	-	-	-	-	125 00
28	T. Hinkley	-	-	-	-	-	-	-	50 50	
28	Flanagan & West	-	-	-	-	26 06				
28	Same	-	-	-	-	31 25				
30	John Scheell	-	-	-	-	-	125 00			
30	Wm. Kinney, office rent and horse hire			-	298 00					
					2,443 77	557 33	5,009 27	2,018 50	2,388 50	617 75	4,140 40

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments and stationery.	Labor.
1837.								
April 8	For one horse	-	-	-	-	$70 00		
15	Joseph Edmondson	-	-	-	-	120 00		
15	Same	-	-	-	-	65 00		
15	G. W. Hooke	-	-	-	-	75		
21	Chouteau & Barlow	-	-	$104 50				
May 8	Parker & Co.	-	-	10 88				
4	G. W. Hooke	-	-	4 50				
8	N. A. Green	-	-	5 85				
8	B. J. West	-	-	10 32				
9	Isaac Demint	-	-	-	-	10 00		
9	Edward Smith	-	-	350 00				
27	Shultise, for wagon	-	-	-	-	6 25		
July 10	Larkin Deaver	-	-	40 00				
10	B. L. Turnbull	-	-	-	-	-	$11 00	
6	John Scheel	-	-	-	$225 00			
22	E. K. Gibbon	-	-	-	200 00			
8	D. Turney	-	-	-	-	-	-	$48 00
Sept'r 9	Edward Smith	-	-	-	600 00			
Oct'r 26	Same	-	-	-	100 00			
Dec'r 8	George Fowler, for maps	-	-	-	-	-	36 00	
26	Wm. Furguson, agent	-	-	-	-	-	-	66 50
30	John Scheel, salary	-	-	-	398 00			
30	Zachariah Long	-	-	-	-	-	-	15 75
1838.								
Jan'y 29	Cropley, for printing	-	$20 00					
Feb'y 15	R. K. Fleming, printing	-	38 75					
March 4	John Scheel	-	-	-	150 00			

	21	E. Cropley, for printing - - -	-	71 75						
May	5	J. S. M'Cracken, do. - - -	-	18 75						
	14	Groves & Ryan, contractors - -	366 75							
	15	T. Kelly, do. - - -	1,722 75							
	15	Groves & Lewis, do. - - -	1,658 00							
	15	Lawler & Barry, do. - - -	1,255 00							
	15	Groves & Groves, do. - - -	1,455 00							
June	7	William Hessin, printing - - -	-	43 75						
	11	A. M'K. Groves & Co. contr. - -	802 25							
July	9	Sharon Tindale - - -	-	-	-	-	-	-	100 00	
	9	Groves & Lewis, contractors - -	761 33							
	9	Groves & Groves, do. - - -	1,397 25							
	9	Groves & Ryan, do. - - -	1,054 59							
	9	T. Kelly, do. - - -	1,496 16							
	9	P. Lawler & Barry, do. - - -	1,701 90							
Sept'r	7	Groves & Ryan, do. - - -	638 00							
	7	P. Lawler & Barry, do. - - -	559 00							
	7	Groves & Lewis, do. - - -	475 00							
	7	Groves & Groves, do. - - -	844 14							
Oct'r	24	T. Kelly, special drafts - - -	2,929 88							
	24	Groves & Ryan, do. - - -	1,307 00							
	24	Barry & Lawler, do. - - -	1,034 81							
Nov'r	28	Sharon Tindale - - -	-	-	-	-	-	-	-	
1837.										
June	17	E. Smith, for disbursements - -	-	50 00						
July	10	Same, do. - - -	-	500 00						
August	3	Same, do. - - -	-	100 00						
	26	Same, do. - - -	-	450 00						
	30	Same, do. - - -	-	450 00						
			21,458 81	1,743 00	526 05	1,673 26	272 00	47 00	427 25	

DISBURSEMENTS—Continued.

Date.	To whom paid.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Labor.
1838.	*Kaskaskia River Improvement.*					
June 7	W. Linn, 2 skiffs	$100 00	$89 05			
8	R. K. M'Laughlin	16 00				
July 9	N. Smith	–	–	–	$5 00	
13	Pay Roll	–	–	–	–	$355 50
27	Wm. C. Greenup	–	–	$125 00		
27	S. Baker	–	–	–	–	70 00
Sept. 15	Chouteau & Barlow	–	249 25			
18	David Tatum	–	25 63			
18	Chouteau & M'Kenzie	–	5 13			
18	J. S. Pease	–	16 50			
18	A. D. Mier & Co.	–	32 62½			
20	Chouteau & Barlow	–	16 00			
22	Wm. C. Greenup	–	–	125 00		
Oct. 27	T. J. Krafft	–	62 14			
27	Lee and Elder	–	25 36			
Nov. 6	Michael Byrne	–		–	–	20 00
30	T. Hinkley, for flour	–	77 50			
30	J. H. Kuntz	–	5 62			
		$116 00	$604 80	$250 00	$5 00	$445 50
1837.	*Belleville & Lebanon Branch Railroad.*					
Oct. 4	W. L. Whitesides	–	–	–		$9 00
Dec. 15	E. Smith, disbursed	$314 30				
1838.						
April 9	James Bostock	–	$10 00			
		$314 30	$10 00	–		$9 00
1837.	*Alton, Hillsboro, and Shelbyville Railroad.*					
Oct. 10	M. M'Connel	–	–	$596 87		
1838.	*Central Railroad.*					
Aug. 10	Loveless & Delay	$6 00				
Sept. 10	J. S. M'Cracken	6 00				
		$12 00				

RECAPITULATION.

Works.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments & stationery.	Labor.	Clerk hire, &c.	Aggregate.
Western Mail Route - -	$52,567 35½	$2,268 25	$165 06½	$1,737 40	–	–	$1,710 74½	$10 00	$58,558 81½
General Expenditure - -	–	2,243 77	551 33	5,009 27	$2,018 50	$2,388 54	617 75	4,140 40	16,969 56
Alton and Mount Carmel Railroad -	21,458 81	1,743 00	526 05	1,673 26	272 00	47 00	427 25	–	26,147 37
Kaskaskia River Improvement -	–	116 00	604 80	250 00	5 00	–	445 50	–	1,421 30
Belleville & Lebanon Branch Railroad	–	314 30	10 00	–	–	–	9 00	–	333 30
Alton and Shelbyville Railroad -	–	–	–	596 87	–	–	–	–	596 87
Central Railroad - - -	–	12 00	–	–	–	–	–	–	12 00
Land entered for State - -	–	466 22	–	–	–	–	–	–	466 22
Total,	74,026 16½	7,163 54	1,857 24	9,266 80	2,295 50	2,435 54	3,210 24½	4,150 40	104,405 43
Western Mail Route - -	1,004 70	–	–	–	–	–	–	–	1,004 70
									$105,410 13

AN EXHIBIT of the number of Engineers employed, rates of compensation, aggregate amount paid them, &c.

Names of Engineers.	When employed.	Salary per year.	Amount paid on different works.				Gen'l Expenditure.	Total.	Remarks.
			Alton & Mt. Carmel railroad.	Western Mail route.	Alton & Shelbyville railroad.	Kaskaskia river improvement.			
Edward Smith	April 7, 1837	$2,500	$700 00	–	–	–	$2,399 27	$3,099 27	Left the service, Dec'r 3, 1838.
Same	Dec. 15, 1837	3,000							
Walter Terrell	April 20, 1837	2,000	–	–	–	–	2,000 00	2,000 00	Paid to April 20, 1838.
Richard A. Gilpin	April 12, 1837	1,500	–	$725 00	–	–	–	725 00	Paid to Sept. 19, 1837.
*John Scheel	May 12, 1837	900	773 26	1,012 40	–	–	275 00	2,060 66	Yet in service.
Edward K. Gibbon	May 12, 1837	700	200 00	–	–	–	–	200 00	Paid to Sept. 1, 1837.
William F. Beach	Oct. 15, 1837	900	–	–	–	–	235 00	235 00	Paid to Dec'r 20, 1837.
William C. Greenup	June 1, 1838	1,500	–	–	–	$250 00	–	250 00	Left service Dec'r 1, 1838.
Samuel Brooke, Jr.	June 1, 1838	900	–	–	–	–	100 00	100 00	Yet in service.
*John Scheel	Nov. 9, 1837	1,200	–	–	–	–	–	–	Whole amount carried out above.
Same	June 1, 1838	1,500							
M. M'Connel, for engineering	–	–	–	–	$596 87	–	–	596 87	
Total amount			1,673 26	1,737 40	596 87	250 00	5,009 27	9,296 80	

REPORT

OF THE

COMMISSIONER OF THIRD JUDICIAL CIRCUIT.

REPORT

OF

THE COMMISSIONER OF THE THIRD JUDICIAL CIRCUIT.

CENTRAL INTERNAL IMPROVEMENT OFFICE,
Vandalia, February 11, 1839.

To the BOARD OF PUBLIC WORKS:

The undersigned herewith submits in the annexed tables and statements, rendered up to the 4th December, 1838, information called for by each House of the General Assembly.

The amount of railroad iron purchased for the Alton and Shawneetown railroad is 14 tons, 15 cwt., 2 qrs. and 11 lbs., at $75 per ton — $1,108 50

470 splicing plates, 320 lbs., at 9 cents.		28 80
15 kegs 5 x ⅝ railroad spikes, 1,500 lbs., at 9 cents		135 00
15 kegs		3 75
Porterage to vessel		8 00
		1,284 05
Bill of castings	$250 38	
Freight on same	5 00	
Insurance and policy	61 78	
		317 16
One railroad burden car		260 00
Cartage		75
		1,861 96
Freight on the same		643 83
Total cost delivered at Shawneetown		2,505 79

Two depots have been contracted to be built; one at Shawneetown, the probable cost of which is estimated at $17,524 80; and the other at Equality, at $8,676 70.

One boat that cost $30 and a skiff at $12 have been purchased for and on account of the Little Wabash river.

The number and salary of the engineers now employed, and on what work, and the number that have been employed since the creation of the system, their compensation and time of service, will be found in the annexed table, marked F.

Two engineering corps have been employed on the Alton and Shawneetown railroad, and three on the Central railroad, in the third and second judicial circuits.

The compensation of the Commissioner of the third judicial circuit, since his appointment to office up to the 4th day of December, 1838, amounts to $2,525, and there has been no charge made for contingent expenses.

Two clerks have been employed; one of them for a few days only; the amount of their salaries will be found under the head of *clerk hire*, in the statements, marked A and B.

Three agents have been employed, and their compensations amount to $161 30, as is shown under the head of miscellaneous, in the statements, marked A and B.

There is neither clerk nor agent now in employ.

It is not known to the undersigned that any persons in the pay of the State have become contractors on any of the works of which he has had control. Neither is it known that any person, either Commissioner or engineer, has purchased land or town property within five miles of any railroad, while in the pay of the State, and before the location of any road.

No scrip has been received from the Fund Commissioners for the purchase of land or otherwise.

It is impossible to state accurately the time employed, and the cost of the survey and location of the road between Shawneetown and Equality, as the time and expense were included in the surveys from Shawneetown to the north side of Muddy river. It is believed that the average cost will not materially differ from that on other surveys and locations made in the same district, and in other parts of the State.

The total amount that has been paid to any one, and all of the persons who are now members of the General Assembly, is $21, except the amount paid the principal engineer of the southern engineering district; which will appear in the annexed table, under the head of engineers' compensation.

As respects lands purchased, donated, their cost and present value, see table, marked E.

All of which is respectfully submitted.

ELIJAH WILLARD,
Commissioner B. P. W., Third Judicial Circuit.

A.

DISBURSEMENTS made by Elijah Willard, Acting Commissioner of the Board of Public Works, of the State of Illinois, up to the 4th December, 1838, on the Central Railroad, in the Third Judicial Circuit, including the expense for surveying the whole, and locating a portion of that part in the Second Judicial Circuit south of Vandalia.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and sistence.	Engineer's compensation.	Transportation.	Engineering instruments & stationery.	Labor.	Clerk hire.
1837.									
June 3	Thornton Grimsley	–	–	$36 50					
5	William Linn, horse	–	$100 00						
11	Larkin Deaver	–	–	89 00					
May 31	Same	–	–	40 00					
June 10	J. C. Atkinson,	–	–	11 43					
10	James C. Essex	–	–	–	–	–	$14 62		
May 31	Pratte, Chouteau & Co.	–	–	6 00					
June 11	Paid steamboat freight	–	–	–	–	$7 00			
July 31	John Rinehart	–	–	23 00					
6	J. C. Dennis & Co.	–	–	–	–	–	12 75		
June 17	R. W. Barnett	–	–	110 10	–	–	19 00		
30	J. S. Hacker, agent	–	21 00	9 50					
25	Jacob Snider	–	–	–	–	–	–	$4 00	
30	W. & W. Willard	–	–	86 63					
August 10	Same	–	–	28 38	–	3 12			
10	Peter Cruse	–	–	5 50					
June 30	Wilson P. Hunt	–	–	14 25					
14	B. W. Brooke	–	10 09						
17	W. Dave	–	–	–	–	–	1 62		
18	Thomas T. Jones	–	–	18 91					
31	Pay Roll	–	–	–	–	–	–	163 53	

June	31	W. C. Whitlock	-	-	-	-	29 72			
August	31	Jonathan Freeman	-	-	-	-	-	666 67		
Sept.	30	Pay Roll	-	-	-	-	-	-	-	-
Oct.	22	W. & W. Willard	-	-	-	-	107 07			
	31	Pay Roll	-	-	-	-	-	-	-	-
Nov.	23	J. F. Kirkpatrick	-	-	-	-	78 27			
	22	Jesse Anglin	-	-	-	-	-	-	-	-
	21	John Jameson	-	-	-	-	-	-	24 00	
	18	Francis Brown	-	-	-	-	2 50			
	30	Pay Roll	-	-	-	-	-	-	-	-
	1	S. Campbell	-	-	-	-	34 00			
	24	Wm. S. Thomas	-	-	-	-	14 00			
	30	W. R. Singleton	-	-	-	-	-	186 56		
	30	Jonathan Freeman	-	-	-	-	-	500 00	48 50	
	30	Wm. C. Whitlock	-	-	-	-	-	-	-	-
	2	Gatey & Coonce	-	-	-	-	8 00			
Dec.	2	Charles Reynolds	-	-	-	-	-	-	-	2 00
	31	Rich'd A. Gilpin	-	-	-	-	-	578 00		
	31	S. Campbell	-	-	-	-	111 00			
Nov.	1	Berry Harris	-	-	-	-	-	-	-	-
Dec.	11	Willis & Maddox	-	-	-	-	-	-	18 00	
	2	William Scott	-	-	-	-	5 38			
	26	William Willard	-	-	-	-	15 00			
	31	J. Freeman	-	-	-	-	-	187 50		
1838.										
Jan'y	1	W. R. Singleton	-	-	-	-	-	58 33	-	3 00
	21	Henry Louis Tarlett	-	-	-	-	-	-	-	7 25
	21	Philip B. Fouke	-	-	-	-	22 75			
	21	J. C. Essex	-	-	-	-	-	-	-	19 25
	17	Jos. Murphy	-	-	-	164 00				
	10	Berthold & Tesson	-	-	-	-	15 40			
	27	J. T. Stibbs	-	-	-	-	216 75			
	27	L. Deaver	-	-	-	-	40 00			
	26	C. Ryhiner	-	-	-	-	-	-	-	4 25
	28	S. W. Meech	-	-	-	-	-	-	-	21 00
	30	T. Hinckley	-	-	-	-	9 10			
	30	M'Clintock & Hughes	-	-	-	-	-	-	-	3 38
	16	Henry Shaw	-	-	-	-	27 50			
	26	F. W. Skinner	-	-	-	-	-	-	-	-
Feb.	1	W. S. Thomas	-	-	-	-	-	-	-	-

113 83
247 98
5 42
139 33
147 50
3 00
15 00
70 00

STATEMENT A—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments & stationery.	Labor.	Clerk hire.
1838.									
Jan'y 30	Thos. Kimball	-	-	$19 00					
19	William Willard	-	-	-	-	$23 75	-	$45 50	
31	Same	-	$10 00	-	-	-	$11 88		$9 00
27	S. S. Condon	-	-	-	-	-	-	-	
2	John Rinehart	-	-	27 00					
25	Samuel Raniel	-	-	1 00	-	-	-	5 00	
5	Daniel Rarringer	-	-	-	-	45 75			
Feb. 18	W. Walters, printing	-	53 00						
13	John Rinehart	-	-	-	-	109 37			
12	M. Davee	-	-	45 00					
Jan'y 20	Berthilden & Co.	-	-	9 75					
31	Grimsley & Young	-	-	40 50					
8	Berry Harris	-	-	-	-	-	-	2 50	
Feb. 28	Pay Roll	-	-	-	-	-	-	99 30	
March 31	Wilson Able	-	-	17 10					
31	Thomas R. Jones	-	-	56 95					
10	Solomon Lonce	-	-	-	-	100 50			
10	Thomas Whitaker	-	-	21 06					
31	J. Freeman	-	-	41 21					
30	W. & W. Willard	-	-	262 65					
20	John S. M'Cracken, printing	-	7 50						
31	Pay Roll	-	-	-	-	-	-	172 47	
April 30	G. W. Paine	-	-	-	-	45 00			
26	S. S Condon	-	-	-	-	-	-	-	10 50
30	Wm. Willard, postage	-	21 23						
30	John Cruse	-	25 87						

April	30	Charles W. Willard	-	-	-	-	-	-	-	-	-	15 00
	30	W. & W. Willard	-	-	-	-	119 33					
	25	Thomas Whitaker	-	-	-	-	19 84					
	30	Pay Roll	-	-	-	-	-	-	-	-	159 99	
May	25	J. S. M'Cracken, printing	-	-	-	25 00						
June	1	Richard A. Gilpin	-	-	-	-	-	$838 33				
May	31	J. P. Cunningham	-	-	-	-	-	815 00				
	31	J. Freeman	-	-	-	-	-	1,041 67	171 06			
	31	W. R. Singleton	-	-	-	-	-	416 67				
	31	G. A. Coeblitz	-	-	-	-	-	-	-	-	140 00	
	31	M. Morrison	-		-	-	-	-	-	-	150 15	
	14	Benj. F. Long	-	-	$104 00							
	17	Enoch C. March	-	-	-	-	-	-	-	355 00		
	31	Wm. Walters, printing	-	-	-	6 00						
Jan'y	1	John Flannegan, horse	-	-	-	100 00						
Feb.	28	Henry Ellis	-	-	-	-	20 40					
March	31	Same	-	-	-	-	31 62					
April	30	Same	-	-	-	-	36 13					
May	17	Same	-	-	-	-	38 12					
March	17	S. W. Meech	-	-	-	-	-	-	-	20 00		
April	6	Jacob Frick	-	-	-	-	-	-	-	2 63		
March	4	Charles Rinehart	-	-	-	-	-	-	-	10 50		
	5	Gaty & Coonce	-	-	-	-	-	-	-	7 00		
May	31	J. P. Cunningham	-	-	-	78 14						
April	5	Thomas Andrews	-	-	-	-	-	-	-	30 00		
	21	Jesse Anglin	-	-	-	-	-	-	93 00			
	21	Same	-	-	-	-	-	-	63 00			
	21	James Anglin	-	-	-	-	-	-	-	-	15 00	
	21	Same	-	-	-	-	-	-	-	-	10 50	
March	21	James Berry	-	-	-	-	8 04					
May	31	James Black	-	-	-	-	-	-	-	3 00		
February		Pay Roll	-	-	-	-	-	-	-	-	148 70	
March		Do.	-	-	-	-	-	-	-	-	105 00	
April		Do.	-	-	-	-	-	-	-	-	128 33	
May		Do.	-	-	-	-	-	-	-	-	104 20	
May		Do.	-	-	-	-	-	-	-	-	156 49	
June		Do.	-	-	-	-	-	-	-	-	171 50	
	11	S. W. Meech	-	-	-	-	-	-	-	8 00		
	18	Greenberry Hazlewood	-	-	-	-	-	-	-	-	14 28	

STATEMENT A—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments and stationery.	Labor.	Clerk hire.
1838.									
June 25	Berthold & Tesson	-	-	-	-	-	$14 38		
30	Richard A. Gilpin	-	-	-	-	-	26 13		
15	Thomas Whitaker	-	-	$15 30					
3	Thomas Murray	-	-	-	-	-	-	$4 00	
10	J. Wentworth, printing	-	$6 00						
2	William Hessin, advertising	-	6 00						
18	John Dougherty, attorney fees	-	10 00						
July 21	James Roberson	-	-	-	-	$4 00			
May 7	Loveless & Delay, advertising	-	6 00						
June 25	John Rineheart	-	-	21 85					
4	H. Eddy, legal advice	-	10 00						
July 31	C. M. Willard	-	-	-	-	-		-	$32 00
9	Henry Sowers	-	-	5 75					
7	S. S. Condon	-	-	-	-	-	-	2 00	
2	Berry Harris	-	-	-	-	-	-	7 00	
31	W. & W. Willard	-	-	36 37					
16	W. Davee	-	-	152 77					
20	Joshua Stearsman	-	-	-	-	39 00			
27	C. M. Willard	-	-	-	-	26 00			
31	Richard A. Gilpin	-	-	-	$333 32				
June 18	Wm. R. Singleton	-	-	-	-	47 75			
July 10	J. P. Cunningham	-	-	17 12					
1	M'Ginley & Graham	$1,744 22	-	-	-	-	-	157 50	
31	Lewis M'Cloud	-	-	-	-	-	-	70 00	
31	G. A. Coeblitz	-	-	-	-	-	-		
May 4	William Davee	-	-	15 00					

July	31	M. M. Morrison	-	-	-	-	-	-	-	-	70 00	
	29	Pay Roll	-	-	-	-	-	-	-	-	36 25	
	31	J. Freeman	-	-	-	-	-	500 00	-	-		
	30	Alexander Furguson	-	-	-	-	41 37					
Sept'r	30	J. P. Cunningham	-	-	-	-	-	-	13 50			
July	19	Roberson & M'Murray	-	-	-	-	-	-	-	10 00		
August	31	Henry Ellis	-	-	-	-	16 08					
	25	George M'Gehey	-	-	-	-	-	-	-	-	3 00	
	20	George Snider	-	-	-	-	-	-	5 50			
	24	H. Deshon	-	-	-	-	-	-	2 50			
	30	G. Cloud, recording	-	-	-	1 30						
	31	C. M. Willard	-	-	-	-	-	-	-	-	-	54 00
	25	John Rineheart	-	-	-	20 90						
	23	Wm. S. Thomas	-	-	-	-	-	-	6 50			
July	17	T. J. Jones	-	-	-	-	44 50					
August	31	James Prevo	-	-	-	-	27 51					
	1	A. L. Mills	-	-	-	-	-	-	25 00			
	23	Wm. Walters, advertising	-	-	-	22 25						
	4	Wm. S. Thomas	-	-	-	-	-	-	-	-	45 00	
	4	Same	-	-	-	-	-	-	12 37			
	9	Silas Lackey, horse	-	-	-	80 00						
	18	Benj. W. Brooks	-	-	-	-	-	-	28 75			
	18	Pay Roll	-	-	-	-	-	-	-	-	88 00	
	22	Graham & Ryan	-	-	249 60							
	22	M'Ginley & Graham	-	-	2,894 34							
Sept'r	20	B. W. Brooks, drugs	-	-	-	13 62						
	30	W. & W. Willard	-	-	-	-	162 17					
	29	George Cloud, recording	-	-	-	1 45						
	28	Wm. Davee	-	-	-	-	3 62					
	10	John S. M'Cracken, advertising	-	-	-	5 00						
	27	Henry Sowers	-	-	-	-	2 75					
Oct'r	1	M. M. Morrison	-	-	-	-	-	-	-	-	70 00	
	1	Lewis A. M'Cloud	-	-	-	-	-	-	-	-	70 00	
	1	Wm. S. Thomas	-	-	-	-	-	-	-	-	90 00	
	1	W. R. Singleton	-	-	-	-	-	83 33				
Sept'r	3	Richard A. Gilpin	-	-	-	-	-	166 66				
	30	J. Freeman	-	-	-	-	-	500 00	77 75			
	29	Jacob Clutz	-	-	-	-	-	-	80 00			
	1	Wm. R. Singleton	-	-	-	-	-	250 00	39 00			
	30	James Prevo	-	-	-	-	25 87					

STATEMENT A—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments and stationery.	Labor.	Clerk hire and expenses.
1838.									
Oct'r 1	J. P. Cunningham	-	-	-	$600 00				
Sept'r	Pay Roll	-	-	-	-	-	-	$145 08	
30	G. A. Kablitz	-	-	-	-	-	-	70 00	
17	E. S. Cropley, advertising	-	$6 00						
Oct'r 3	David W. Boggs	-	-	-	-	$2 00			
3	W. G. Nimmo	-	9 50						
2	George Cloud, recording	-	4 16						
6	Bryan & Shaunessay	$192 00							
6	Graham & Ryan	586 28							
6	M'Ginley & Graham	3,736 98							
31	Richard A. Gilpin	-	-	-	333 32				
13	Loveless & Delay, advertising	-	7 00						
Sept'r 14	Richard Beck, advertising	-	17 50						
Nov'r 3	C. M. Willard	-	-	-	-	-	-	-	$50 00
Oct'r 31	James Prevo	-	-	$22 81					
31	Pay Roll	-	-	-	83 33	-	-	280 74	
Nov'r 17	W. G. Nimmo	-	5 97						
12	Richard A. Gilpin	-	-	26 43					
3	John G. Coe, wood	-	9 75						
8	John J. Jones	-	-	16 75					
16	Wm. Willard, postage	-	6 62						
16	W. & W. Willard $84 55 Less by oxen sold 67 50	-	-	17 05					
3	Leonard Lipe	-	-	2 40					
22	James Reed, recording	-	10 06						
22	David Spence	-	-	-	-	-	-	23 00	

	13	W. Davee	-	-	30 62						
	25	W. Davee $59 62½ / By 3 pair blankets 22 00	-	-	37 63						
	30	J. Freemen	-	-	-	500 00					
	17	T. J. Jones	-	-	21 00						
	12	Joseph Graham	-	-	37 00						
	30	Pay Roll	-	-	-	249 99	-	-	128 17		
	12	M'Ginley & Graham	2,418 50								
	12	Graham & Ryan	1,022 92								
	6	Bryan Shaunessay	396 58								
Oct'r	21	John P. Cunningham	-	-	-	150 00					
Nov'r	30	C. Roynolds or Ryhiner	-	-	-	-		$54 25			
August	12	John T. S. Sullivan, writing deed	-	10 00							
Nov'r	30	S. W. Meech	-	-	-	-	-	14 75			
	29	J. S. M'Cracken, advertising	-	7 00							
Dec'r	4	A. Ferguson	-	-	38 50						
Nov'r	30	W. S. Thomas	-	-	-	-	15 94				
Dec'r	1	W. R. Singleton	-	-	-	-	16 68				
Nov'r	29	C. M. Willard	-	-	-	-	-	-	-		48 00
	8	William Croos, wood	-	7 00							
Oct'r	3	William Linn, ribband	-	2 00							
Nov'r	3	C. M. Willard	-	-	-	-	52 50				
Oct'r	2	G. W. Porter, clerk hire Central office	-	41 00							
Dec'r	1	Sundry persons, release	-	10 00							
Feb'y	5	Government land	-	600 00							
	5	Railroad office and lots	-	3,000 00							
July	16 & 21	Government land	-	791 76							
	16	Elijah Willard, compensation as commis'r	-	2,350 00							
	16	William Day, for land	-	500 00							
Nov'r		Elijah Willard, compensation as commis'r	-	75 00							
		Isaac Koeser, land agent	-	80 12							
			13,345 42	8,534 87	2,868 96	9,033 68	1,245 79	675 64	3,901 24		218 50

B.

DISBURSEMENTS made by Elijah Willard, Acting Commissioner of the Board of Public Works of the State of Illinois, up to the 4th December, 1838, for and on account of the Alton and Shawneetown Railroad, including the expense of surveying that part in the Second Judicial Circuit to the intersection with the Alton and Mount Carmel Railroad.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineer's compensation.	Transportation.	Engineering instruments & stationery.	Labor.	Clerk hire.
1827.									
Jan'y 5	L. Deaver	-	-	$131 00					
5	Henry Shaw	-	-	3 00					
21	John Rinehart	-	-	27 12					
10	W. & W. Willard, horse	-	$66 00						
31	J. Freeman	-	-	-	-	$11 00			
31	Peter Cruse	-	-	2 25					
25	Nimrod Hazlewood	-	-	-	-	2 00			
August 2	Mead & Adriance	-	-	-	-	-	$85 00		
2	Sobliton & Campbell	-	-	24 00					
14	W. &. W. Willard	-	-	136 57					
24	J. T. Stibbs	-	-	90 00					
5	Henry L. Tabett	-	-	-	-	-	12 50		
25	Orvel Poole	-	-	6 50					
26	Hilbourn & Hazen	-	-	10 00					
23	E. P. Nicholson	-	-	1 50					
23	G. W. Cayton	-	-	-	-	-	1 75		
10	John Lane, agency	-	60 18						
31	Wm. Grammer	-	-	-	-	-	-	$10 66	
31	George F. Plott	-	-	-	-	-	-	10 66	
31	Leavit Locklear	-	-	-	-	47 55			

June	31	Pay Roll	-	-	-	-	-	-	-	62 00
Sept.	6	Nathan Olney	-	-	-	-	3 11			
	6	Alex. Kirkpatrick	-	-	-	-	18 00			
	6	Orvel Poole	-	-	-	-	28 00			
	25	J. B. M'Carlin	-	-	-	-	15 91			
	18	Wm. T. M'Cool	-	-	-	-	11 98			
	25	Joseph Hayne	-	-	-	-	10 00			
	27	George F. Plott	-	-	-	-	-	-	-	18 63
	30	Joseph Early	-	-	-	-	5 37			
	27	Wm. Grammer	-	-	-	-	-	-	-	18 63
	30	David Grable	-	-	-	-	3 38			
	30	Leavit Locklear	-	-	-	-	18 12			
	30	Same	-	-	-	-	-	84 25		
	30	Pay Roll	-	-	-	-	-	-	-	161 60
	30	D. N. Lathrop	-	-	-	-	-	500 00		
Oct.	16	Henry Yoste	-	-	-	-	11 46			
	25	John Galloway	-	-	-	-	16 88			
	31	Leavit Locklear	-	-	-	-	-	98 55		
	16	John Clark	-	-	-	-	7 25			
	31	Pay Roll	-	-	-	-	-	-	-	189 22
Nov.	22	Caleb Baldwin,	-	-	-	-	6 68			
Oct.	27	Robert Martin	-	-	-	-	2 72			
Nov.	1	Berry Harris	-	-	-	-	-	-	-	3 00
	26	Thomas Redick	-	-	-	-	24 97			
	20	Pay Roll	-	-	-	-	-	-	-	178 33
	30	Leavit Locklear	-	-	-	-	-	96 45		
	30	E. J. Nicholson	-	-	-	-	13 12			
	30	Alex. Kirkpatrick	-	-	-	-	11 62			
Dec.	6	Leavit Locklear	-	-	-	-	-	22 81		
	13	Joseph Hay	-	-	-	-	-	-	7 00	
	27	John Cranshaw	-	-	-	-	4 40			
	26	A. C. Cummins, wood	-	-	-	2 25				
	29	J. W. Anderson	-	-	-	-	6 50			
	29	Wm. Edwards	-	-	-	-	-	-	3 50	
	30	E.H. Gatewood	-	-	-	-	-	-	5 13	
	30	C. R. Anderson	-	-	-	-	11 00			
	31	D. N. Lathrob	-	-	-	-	-	500 00		
	31	Pay Roll	-	-	-	-	-	200 00	-	49 67
1838.										
Jan'y	30	E. K. Gibbon	-	-	-	-	-	-	26 75	

STATEMENT B—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments & stationery.	Labor.	Clerk hire, &c.
1838.									
Jan. 31	Pay Roll	-	-	-	$366 67				
31	Wm. Willard, postage	-	$10 00						
15	Wm. H. Stickney, printing	-	55 00						
1837.									
Nov. 25	Henry Eddy, form for a deed	-	5 00						
1838.									
Feb 28	Pay Roll	-	-	-	241 67				
8	W. Walters, printing	-	43 25						
March 21	A. Richardson, wood	-	20 50						
31	S. R. Rowan, office rent	-	16 00						
31	W. A. Docker	-	-	$29 12					
18	D. B. Blanchard	-	-	-	-	-	$470 75		
31	Pay Roll	-	-	-	341 67	-	-	$70 83	
1	Henry Eddy	-	-	-	-	-	-	30 00	
30	J. S. M'Cracken, printing	-	48 00						
30	W. & W. Willard	-	120 00						
April 3	Henry Yoste	-	-	50 32					
30	Same	-	-	-	-	$75 00			
30	David G. Yoste	-	-	24 44					
May 1	Caleb Baldwin	-	-	9 14					
1	Samuel Bird	-	-	6 86					
April 10	E. J. Nicholson	-	-	15 50					
9	Albert G. Stanet	-	-	6 25					
May 1	D. B. Blanchard	-	-	44 43					
1	Hilburn & Hazen	-	-	25 50					
April 30	Pay Roll	-	-	-	566 66	-	-	317 00	

March	29	William Hodge, advertising	-	15 00							
April	30	William Willard, postage	-	18 70							
	30	Same	-	-	-	-	64 75				
May	25	Alfred Richardson	$4,930 95								
	31	Wm. Walters, advertising	-	15 00							
	2	Penn & Elliott, printing	-	21 00							
1838.											
June	1	Caleb Baldwin	-	-	9 99						
April	30	A. Richardson	-	-	1 50						
May	9	David G. Yoste	-	-	15 62						
	9	Wm. Siddle	-	-	30 00						
	31	Henry Yoste	-	-	-	-	88 00				
	9	John Lane	-	-	9 50						
	22	Thomas Redick	-	-	35 29						
	25	Joseph Earsley	-	-	10 00						
	2	A. K. Boutwell	-	-	15 00						
	4	T. F. Vaught, official services	-	6 25							
June	1	Samuel Bird	-	-	2 13						
May	31	Pay Roll	-	-	-	566 66	-	-	317 00		
June	10	John Wentworth, publishing	-	15 00							
	6	Hannah Stone	-	-	8 25						
	30	Hilbourn & Hazen	-	-	55 04						
	30	David G. Yoste	-	-	55 82						
	6	M. S. Ensmear	-	-	29 10						
	20	Westley Yoste	-	40 00							
	30	Henry Yoste	-	-	-	-	106 75				
	12	Jesse Dooley	-	-	6 15						
	28	Leonard Gibbon	-	-	-	-	95 00				
	30	John Cranshaw	-	-	26 07						
	2	Wm. Hessin, advertising	-	15 00							
	30	Wm. Willard, postage	-	3 12							
	30	Pay Roll	-	-	-	566 66	-	-	262 00		
	30	Alfred Richardson	2,387 46								
	30	James Ryan	1,584 85								
	28	Leonard White, recording	-	22 50							
	30	Henry Eddy	-	-	10 71						
July	31	David G. Yoste	-	-	50 17						
	31	Pay Roll	-	-	-	341 66	-	-	212 00		
	31	Henry Yoste	-	-	-	-	91 37				
August	25	J. M. Peck, advertising	-	9 00							

STATEMENT B—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments and stationery.	Labor.	Clerk hire and office expenses.
1838.									
August 30	Alfred Richardson	$4,389 86							
30	James Ryan	678 20							
Sept. 12	Leonard White, recording	-	$3 50						
23	Wm. Waltere, advertising	-	12 00						
30	Wm. Willard, postage	-	3 43						
10	John S. M'Cracken, advertising and printing	-	54 50						
10	James Ryan	504 00							
17	E. S. Cropley, advertising	-	10 00						
15	C. L. Adams	-	-	$10 15					
11	David G. Yoste	-	-	86 69					
11	Henry Yoste	-	-	-	-	$94 26			
July 5	A. G. Rolson & Co.	-	1,861 96						
August 30	P. Redman	-	643 83						
30	Pay Roll	-	-	-	$341 66	-	-	$212 00	
Sept. 30	Pay Roll	-	-	-	341 66	-	-	212 00	
August 18	G. Rayhll	-	-	5 75					
Oct. 20	Alfred Richardson	4,510 43							
20	James Ryan	764 16							
22	Edward Smith	-	-	10 00					
13	Loveless & Delay, advertising	-	5 50						
13	Same, do.	-	4 50						
9	Henry Yoste	-	-	-	-	98 00			
9	David G. Yoste	-	-	34 53					
Nov. 17	D. N. Lathorpe	-	-	25 75					
3	J. Van Dusser	-	-	18 00					
16	Robert Cassels	-	20 00						
16	Orvel Poole	-	-	-	-	30 37			

	13	John Cranshaw	-	-	70 98						
	12	Thomas Cranshaw	-	-	7 74						
	12	Thomas Whitaker	-	-	3 45						
	12	D. N. Lathorpe	-	4 87							
	17	W. A. G. A. S. H. Posey	-	-	-	-	-	$3 03			
	3	T. Van Dusser, office rent	-	83 31							
	13	Hilbourn & Hazen	-	-	113 75						
	13	Henry Eddy	-	-	3 92						
	21	John Lane	-	-	16 25						
	21	T. F. & D. Vaught	-	-	1 25						
	28	D. B. Blanchard	-	-	-	-	-	-	109 34		
	28	Vernon & Lampher	-	-	-	-	37 25	-			
Sept.	30	Pay Roll	-	-	-	750 00	-	-	230 00		
Oct.	31	Do.	-	-	-	341 66	-	-	87 00		
Nov.	30	Do.	-	-	-	341 66	-	-	87 00		
Dec.	1	Henry O. Terrell	-	-	11 50						
Oct.	2	C. M. Willard	-	-	-	-	-	-	-		$30 00
Nov.	16	Wm. Willard, postage	-	3 81							
	16	Timothy Guard	-	-	-	-	-	-	117 00		
	29	J. S. M'Cracken, advertising	-	25 00							
Dec.	3	Edward Smith	-	-	-	625 00					
Nov.	22	Alfred Richardson	1,452 10								
	22	James Ryan	642 50								
	22	Bogardis & Cranshaw	836 74								
	28	E. K. Gibbon & A. K. Gibbon	637 94								
1837.											
Dec.		Government land	-	200 00							
June	11	Do.	-	1,100 00							
	11	Edward Smith	-	-	-	750 00					
	11	Elijah Willard	-	100 00							
			23,318 29	4,763 36	1,664 02	8,263 26	1,143 36	615 41	2,966 57		30 00

C.

DISBURSEMENTS made in Fourth Judicial Circuit by Elijah Willard, Acting Commissioner of the Board of Public Works of the State of Illinois, up to December 4, 1838, *for and on account of the Alton and Mt. Carmel Railroad.*

Date.	To whom and for what paid.	Miscellaneous.
1837.		
June 14	Government land . . .	$649 86
14	A. P. Field, transcript . . .	2 40
1838.		
Jan. 24	Government land . . .	1,291 35
24	David Spance . . .	22 50
28	William Willard . . .	9 18
		1,975 29

D.

DISBURSEMENTS made in the Fourth Judicial Circuit, on the Little Wabash River, by Elijah Willard, Acting Commissioner of the Board of Public Works for the Third Judicial Circuit of the State of Illinois, up to 4th December, 1838.

Date.	To whom paid.	Miscellaneous.	Camp furniture & subsistence.	Engineer's compensation.	Transportation.	Labor.
1838.						
April 4	J. Ratcliffe	-	$15 00			
4	J. S. Graham, ferriage	$2 63				
March 28	Winde Beiley	-	23 63			
21	Frederick Archer	-	-	-	$8 00	
30	Pay Roll	-	-	$125 00	-	$37 50
August 25	P. H. Bagwell	-	-	-	11 93	
22	C. L. Seymour	-	-	-	9 62	
10	Joseph Jones	-	41 37			
July 31	Pay Roll	-	-	-	-	199 50
31	John S. Ouban	-	-	-	10 00	
30	P. Smith	-	12 50			
16	Andrew Knipp	-	-	-	15 00	
13	Linn & Green, skiff	12 00	1 87			
10	H. R. Green	-	5 81			
10	Joshua Beal	-	23 20			
9	E. Travers	-	-	-	2 00	
June 10	C. L. Seymour	-	-	-	12 64	
July 12	E. Travers	-	-	-	2 62	
June 8	James M. Peery, map	10 00				
May 14	C. L. Seymour	-	-	-	2 44	
September	James Wilson	-	-	-	-	3 00
October &	S. K. Pickering	-	11 46			
November	Thomas Black	4 50				
	George Johnson	4 94				
	Peter Smith	-	21 62			
	John D. Harris	-	-	-	-	2 50
	James Dowell	-	-	-	-	3 75
	Andrew Kenupp	-	-	-	-	12 00
	Daniel Haise	-	4 50			
	Alex. West	-	6 50			
	Orin Coats	-	-	-	-	7 19
	John M'Cawley	-	12 20			
	Anderson Arnold	-	-	-	-	3 75
	George W. Riggins	-	20 38			
	Jesse Cooper	-	2 69			
	L. Courtwright	-	-	-	-	3 44
	James Breedlove	-	12 00			
	George Bowen	-	4 00			
	James Parker	-	4 94			
	John Lewis & Co.	-	-	-	-	8 73
	Robert M'Daniel	-	-	-	-	5 50
	Arthur Evans	-	-	-	-	13 43
	Thomas Clahen	-	-	-	-	10 43
	Thomas Rodgers	-	-	-	-	7 50
	William Sewell	-	10 55			
	James White	-	-	-	-	9 37
	Jonathan Parris	-	-	-	-	9 38
	John M'Mahil	-	-	-	-	13 18
	L. Courtwright	-	-	-	-	5 94

STATEMENT D—Continued.

Date.	To whom paid.	Miscellaneous.	Camp furniture & subsistence.	Engineers' compensation.	Transportation.	Labor.
1838.						
	Crick & Ruster	-	-	-	-	$5 31
	Joseph Rodgers	-	$1 62			
	Samuel M'Daniel	-	-	-	-	6 25
	John Hugh	-	-	-	-	2 75
	Thomas Ano	-	-	-	-	8 75
	Richard Eparson	-	-	-	-	11 45
	Jackson Nelson	-	-	-	-	14 13
	Wm. Blackman	-	-	-	-	2 00
	John Kirksay	-	-	-	-	8 50
	Wm. L. Longston	-	2 40			
	Wm. S. Lewis	-	-	-	-	8 75
	Lewis & Co.	-	-	-	-	14 50
	Gideon Hickenbottom	-	-	-	-	2 00
	Washington Riggins	-	9 13			
	Richard Eparson	-	-	-	-	12 55
	N. N. Duff	-	-	-	-	12 98
	James Miller	-	11 75			
	Caleb Pidgeway	-	6 13			
	Wm. Snide	-	11 65			
	R. & S. Sorrel	-	-	-	-	10 00
	George Farris	-	-	-	-	15 50
	George Gable	-	-	-	-	10 91
	Nathan Martin	-	5 05			
	Thomas Evans	-	-	-	-	28 12
	Farris & Vour		-	-	-	21 43
	Smith & Kirksay	-	-	-	-	40 94
	Creek & Sorrel	-	-	-	-	3 29
	Wm. Stone	-	2 50			
	John Balance	-	-	-	-	43 55
	Wm. M. Comstock	-	8 82			
	Joshua Beal	-	150 35			
	Moses Bedell	-	13 30			
	P. H. Bagwell, boat	$30 00	-	-	$39 90	
	Joshua Beal	-	3 44			
	Same, axes	26 51				
	H. Gun, do.	6 00				
	Isaac Steel	-	-	-	-	13 25
	Samuel Casler	-	-	-	-	20 31
	M'Cawley & Alexander	2 12				
	M. Hugh	-	-	-	-	5 75
	M'Daniel Davis	-	-	-	-	12 39
	Samuel M'Daniel	-	-	-	-	30 87
	Jackson Farmer		-	-	-	26 48
	Creek & Heady	-	-	-	-	82 20
	Isaac Streete	-	-	-	-	7 83
	M'Daniel & White	-	-	-	-	9 75
	Thomas Rodgers	-	-	-	-	20 50
	Worthy Nance	-	-	-	-	15 00
	Harrison Rigg	-	-	-	-	25 91
	W. Riggin	-	-	-	67 25	
	J. & F. Clarke	-	-	-	-	47 84
	Taylor & Farris	-	-	-	-	24 91
	Smith & Hobson	-	-	-	-	23 00
	Moulins & Sanders	-	-	-	-	24 50

STATEMENT D—Continued.

Date.	To whom paid.	Miscellaneous.	Camp furniture & subsistence.	Engineers' commission.	Transportation.	Labor.
1838.						
	Frasier & Rewalk	-	-	-	-	$112 64
	Joshua Adams	-	-	-	-	121 25
	Brittunham & Elliott	-	-	-	-	36 75
	Mildes & Ulm	-	-	-	-	41 50
	J. Jones, Esq.	-	$80 34			
	Henry Young	-	-	-	-	29 92
	W. & J. Hutchinson	-	-	-	-	49 81
	Miller & Wood	-	11 05			
	Wm. Golden	-	-	-	-	6 25
	Robert & Charles Jay	-	-	-	-	71 41
	John Frazier	-	19 00			
	Joseph Jones	-	-	-	-	207 00
	H. F. Elliott	-	3 00			
	E. Baker	-	8 92			
	Silas Knapp	-	2 88			
	R. G. Sorrel, boat gunnel	$12 00				
	Daniel Pew	-	-	-	-	13 66
	James Parker	-	4 00			
	James Breedlove	-	19 50			
	Risley Tilton	-	24 50			
	A. Shields	-	-	-	-	14 40
	Tanner & Handerson	-	-	-	-	8 12
	John Brown	-	13 78			
	John Ridgeway	-	-	-	-	84 00
	Wm. Willard	-	-	-	-	26 25
	Peter Smith	-	1 75			
	John Ridgeway	-	-	-	$17 00	
	Total.	110 70	748 68	125 00	198 40	1,853 18

RECAPITULATION.

Works.	Construction.	Miscellaneous.	Camp furniture and subsistence.	Engineers' compensation.	Transportation.	Engineering instruments & stationery.	Labor.	Clerk hire.	Aggregate.
Central Railroad . .	$13,345 42	$8,354 87	$2,868 96	$9,033 68	$1,245 79	$675 64	$3,901 24	$218 50	$39,644 10
Alton and Shawneetown Railroad .	23,318 29	4,763 36	1,664 02	8,263 26	1,143 36	615 41	2,966 57	30 00	42,764 27
Alton and Mt. Carmel Railroad .	–	1,975 29	–	–	–	–	–	–	1,975 29
Little Wabash River . .	–	110 70	648 68	125 00	198 40	–	1,853 18	–	2,935 96
Aggregate . . .	36,663 71	15,204 22	5,181 66	17,421 94	2,587 55	1,291 05	8,720 99	248 50	87,319 62

E.—*STATEMENT of Government Lands entered, and Lands purchased, up to December* 4, 1838.

On and to what work charged.	Land district.	Description.	No. of section.	Township.	Range.	Number of acres.	Amount.	Total cost.	Present value.
Central railroad .	Kaskaskia	N. E. ¼	4						
Same .	Same	W. ½ N. W. ¼; S. W. ¼ & W. ½ S. E. ¼ - -	3	16 S.	2 W.	480	$600 00	-	$2,400 00
Same .	Same	E. ½ N. E. ¼ - -	10						
Same .	Same	N. E. ¼ - -	22	16 "	1 "				
Same .	Same	W. ½ N. E. ¼ - -	15						
Same .	Same	E. ½ N. E. ¼ - -	3	15 "	1 "				
Same .	Same	W. ½ S. W. ¼ - -	35	14 "	1 "	633.41	791 76	-	6,334 10
Same .	Same	E. ½ N. W. ¼, W. ½ N. E. ¼ -	26	14 "	1 "				
Same .	Same	E. ½ S. W. ¼ - -	14						
Same .	Same	Part of N. ½ - -	25	17 "	1 "	10	500 00	-	50,000 00
Same .	Same	Jonesboro' Railr'd office & lot	-	-	-	-	3,000 00	-	3,000 00
								$4,891 76	
Alton & Shawneetown r'd	Shawneetown	N. E. ¼, E. ½ N. W. ¼, S. W. ¼, S. E. ¼ - -	9						
Same .	Same	W. ½, N. W. ¼ & S. W. ¼	10	9 "	9 E.				
Same .	Same	E. ½ S. E. ¼ - -	8			1,080	1,300 00	1,300 00	5,400 00
Same .	Same	N. W. ¼ - -	20	7 "	2 "				
Alton & Mt. Carmel r'd	Same	N. E. ¼ - -	4	2 "	14 W.				
Same .	Same	E. ½ S. E. ¼ - -	19	1 "	13 "				
Same .	Same	N. W. ¼ & E. ½ S. E. ¼ -	9	2 "	9 E.				
Same .	Same	S. W. & S. E. ¼ -	9						
Same .	Same	N. E. ¼ & E. ½ S. E. ¼ -	6	1 "	5 "				
Same .	Same	E. ½ S. E. ¼ - -	35	1 "	6 "	1,553	.	1,941 21	7,765 00
Same .	Same	S. W. ¼ - -	36	1 "	7 "				
Same .	Same	S. E. ¼ - -	11	2 "	9 "				
Same .	Same	N. W. ¼ - -	11	1 "	5 "				
Same .	Same	S. W. ¼ & E. ½ S. E. ¼ -	32	1 "	7 "				
Alton & Shawneetown r'd	Same	In-lots 1,178, 1,175, 1,176, 1,070, and half of out-lot 272	-	-	-	*4 †.75	Donated. "	- -	2,500 00 100 00
					Aggregate	3,761.16	-	8,321 97	77,499 10

*In Shawneetown. †In Equality.

F.

AN EXHIBIT of the number of engineers employed, their rates of compensation, amount paid to each in full for their services, rendered on the Central Railroad, in the Third and Second Judicial Circuits, south of Vandalia; also on the Alton and Shawneetown railroad, in the same districts, and on the Little Wabash river, in the Fourth Jadicial Circuit, up to December 4, 1838.

Names of engineers.	When employed.	Salary per year.	Amount paid on several works.			Total am't paid.	Remarks.
			Central railroad.	Alton and Shawnee'n railroad.	Little Wabash river.		
John Freeman -	From May 1, 1837, to Dec. 15, 1837	$2,000	$1,250 00				
Same -	" Dec. 15, 1837, to June 1, 1838	2,500	1,145 84				
Same -	" June 1, 1838, to Dec. 1, 1838	3,000	1,500 00				
				-	-	$3,895 84	
W. R. Singleton -	" Aug. 25, 1837, to Dec. 31, 1837	700	244 89				
Same -	" Jan. 1, 1838, to Dec. 1, 1838	1,000	916 66	-		-	Transferred to 2d judicial circuit, Dec. 2, 1838.
				-	-	1,161 55	
R. A. Gilpin -	" Sept. 19, 1837, to Dec. 1, "	2,000	2,411 29	-	-	2,411 29	
J. P. Cunningham -	" Dec. 18, 1837, to Oct. 31, "	1,800	1,565 00	-	-	1,565 00	Left service October 31, 1838.
D. N. Lathorpe -	" July 1, 1837, to Nov. 30, "	2,000	-	$2,833 29	-	2,833 29	
D. B. Blanchard -	" Sept 5, 1837, to Feb. 1, "	1,500	-	604 97	-	-	Left service Sept. 31, 1838.
Same -	" March 1, 1838, to April 1, "	1,500	-	125 00			
Same -	" April 1, 1838, to Oct 1, "	1,800	-	900 00			
					-	1,629 97	
E. K. Gibbon -	" Sept. 1, 1837, to March 20, "	900	-	500 00	-	500 00	Left service March 20, 1838.
John R. Vernon -	" April 1, 1838, to Dec. 1, "	1,200	-	800 00	-	800 00	Left service Nov. 30, 1838.
B. G. Roots -	" April 1, 1838, to Dec. 1, "	900	-	600 00	-	600 00	
W. B. Lanphier -	" April 1, 1838, to Nov. 1, "	900	-	525 00	-	525 00	Left service Nov. 1, 1838.
Edward Smith -	" June 15, 1838, to Sept. 15, and from Sept. 15, to Dec. 3, 1838	3,000	-	1,375 00	-	1,375 00	Left service Dec. 3, 1838.
E. K. Gibbon -	One month's service from March 20 to April 20, 1838	1,500	-	-	$125 00	125 00	Left service.

REPORT

OF THE

COMMISSIONER OF FOURTH JUDICIAL CIRCUIT.

REPORT

OF

THE COMMISSIONER OF THE FOURTH JUDICIAL CIRCUIT.

JANUARY 4, 1839.

To the BOARD OF PUBLIC WORKS:

By an examination of the various inquiries made to the Board by each House of the General Assembly of the State of Illinois, I discover that much of the information asked for is given in the semi-annual report made to the Governor, and which has been laid before the Legislature. In giving the following detail of information on the various inquiries not before answered, it will be my desire to make it as satisfactory as possible.

I have made no contract for depots in my district. I have obtained suitable lots for the necessary public buildings, at the various points where they will be required, by donations, with the exception of forty-five dollars paid towards one at Paris. I see, from the accounts presented for settlement by the engineer on the Great Wabash, that he has bought one canoe, for which he paid five dollars.

I have no clerk or agent employed at this time, and have only hired one since my appointment, and the aggregate amount paid him was ninety-six dollars.

I have paid for agency on the Northern Cross railroad, in paying engineering party, and obtaining the right of way, eighteen dollars.

On the Central Branch railroad, for paying engineering party, and obtaining the right of way, twelve dollars and fifty cents.

For obtaining the right of way on the eastern division of the Southern Cross railroad, from Alton to Mt. Carmel, and legal services connected therewith, sixty-one dollars and seventy-five cents.

For agency, at sundry times, in obtaining funds to make the necessary payments in my district, twenty-two dollars.

The aggregate amount of my compensation, since I have entered on a discharge of my duties as Commissioner, is $2,795.

I would refer to the accompanying tables, numbered 1, 2, and 3, for the amount paid for the right of way, and to whom paid; and to tables, numbered from 1 to 7, for a classification under various heads of my disbursements.

I would likewise refer to table No. 8, for a full and detailed account of the engineers employed, their rates of compensation, and aggregate amount paid them.

Eight or ten appeals have been taken from the award of jurors, on the right of way on the eastern division of the Northern Cross railroad, by the owners of land.

Three appeals have been taken by the same on the Central Branch railroad, and one appeal in behalf of the State on the eastern division of the Southern Cross railroad.

I have paid no charges under the head of contingent expenses.

I have entered one lot of land on the Southern Cross railroad, containing 160 acres. The whole expense connected with the entry was $217 12, and the same was charged to that road; and the land is now considered worth $4 per acre.

The number of engineering parties organized in the eastern engineering district, and that portion of the fourth judicial circuit under my superintendence, lying in the southern district, are as follows, viz:

One party on the Central Branch railroad, and one on the Northern Cross railroad; and both of said parties were employed in locating the Central railroad between Vandalia and Decatur.

One party in making definite locations on the Southern Cross railroad.

I organized a party also to make a survey from Charleston to the Wabash river.

And we have had another party for making the necessary surveys on the Great Wabash.

The accompanying tables give an exhibit of disbursements up to the first day of December, 1838.

M. K. ALEXANDER,
Commissioner B. P. W., Fourth Judicial Circuit.

No. 1.

DISBURSEMENTS made by M. K. Alexander, Commissioner of the Board of Public Works of the State of Illinois, up to the 1st December, on the Southern Cross Railroad from Alton to Mount Carmel.

Date.	To whom paid.	Construction.	Miscellaneous.	Subsistence.	Labor.	Engineering.	Right of way.
1837.							
Dec. 15	J. C. Dinnies, stationery	–	$30 74				
16	Mead & Adriance, measuring tapes	–	9 50				
16	L. Wilson	–	–	$1 00			
27	W. Deputy	–	–	6 70			
27	W. Kozer, office furniture	–	5 41				
29	H. M'Lane	–	–	11 25			
29	P. W. Quinton, stationery	–	75				
1838.							
Jan. 2	R. Beck, printing	–	21 00				
3	J. N. Jaques, office furniture	–	18 00				
6	W. Kozer, do.	–	4 50				
11	H. O. Terrell	–	–	13 94			
18	W. F. Beach	–	–	2 80			
20	J. Beall, stationery & office furniture	–	20 79				
Feb. 23	J. Frazier	–	–	–	$27 70		
23	J. Campbell	–	–	–	26 17		
23	C. L. Seymour	–	–	4 56			
March 2	F. Moser, office furniture, &c.	–	5 75				
5	J. Key	–	–	8 84			
10	S. Rigg	–	–	17 12			
10	R. Beck, advertising	–	12 00				
10	Same, printing	–	25 38				
10	J. Ford, mending harness	–	50				

	10	R. K. Deobler	–	–	38 19						
	10	J. Breedlove	–	–	12 75						
	10	A. Ritchie	–	–	–	50 00					
	10	E. Travers	–	–	–	44 00					
	12	C. L. Seymour	–	–	–	–	$375 00				
	12	W. F. Beach	–	–	–	–	205 00				
	15	H. O. Terrell	–	–	–	90 00					
	12	B. F. Burt	–	–	–	4 53					
	12	B. Wallace, wood for office	–	10 50							
	20	G. Wheeler	–	–	6 50						
	20	R. Rigg	–	–	21 38						
	20	J. C. Dinnies, stationery	–	4 70							
	21	J. Skeavington	–	–	30 80						
	28	J. Michaels	–	–	9 75						
	28	A. Stewart	–	–	–	75					
April	2	W. Higgins	–	–	5 00						
	5	C. L. Seymour, stationery	–	2 25	63						
	5	S. D. M'Clure	–	–	50						
	11	J. D. Knapp, repair of instruments	–	5 75							
	15	M. Bowman	–	–	7 81						
May	2	W. Burket	–	–	3 00						
	2	M. Bowman	–	–	5 06						
	9	R. Williams	–	3 25							
	9	E. Ulm	–	–	–	3 00					
	10	S. Keneipp	–	–	–	6 00					
	10	T. S. Hinde, office rent	–	20 00							
	11	W. L. Wilman, rope	–	4 00	–	1 31					
	11	S. Rigg	–	–	13 35						
	11	R. Rigg	–	–	3 63						
	11	C. L. Seymour	–	–	4 89						
	15	J. Breedlove	–	–	7 87						
	15	E. Reed	–	–	–	–	–	$50 00			
	15	Shannon & Co.	$1,564 40								
	15	Murphy & Co.	1,002 84								
	15	J. Clark & Co.	84 00								
	15	Rodgers & Co.	923 96								
	15	E. Clark	624 91								
	17	R. K. Deobler	–	–	13 22						
	18	D. Scott	180 29								
	2	Penn & Eliot, advertising	–	20 00							

STATEMENT No. 1—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Subsistence.	Labor.	Engineering.	Right of way.
1838.							
May 10	E. Travers	–	–	–	$40 00		
13	C. L. Seymour	–	–	–	–	$250 00	
15	A. Ritchie	–	–	–	30 00		
15	H. O. Terrell	–	–	–	60 00		
15	Wm. F. Beach	–	–	–	–	150 00	
21	Wm. Read	–	–	–	–	–	$44 00
June 11	W. S. Comstock	–	–	–	33 75		
12	P. H. Bagwell, wagon	–	$60 00				
13	M. Bedell, candles	–	6 81				
20	B. Davis	–	–	–	–	–	50 00
20	T. Crackles	–	–	–	–	–	79 20
20	J. Buckner	–	–	–	–	–	69 00
21	W. Hall	–	–	–	–	–	69 00
21	W. Hassell	–	–	–	–	–	72 00
28	C. L. Seymour, justice fees, &c.	–	1 94	$1 75			
29	H. O. Terrell, land entered	–	217 12				
July 22	J. Key	–	–	–	–	–	150 00
4	C. L. Seymour, fuel, &c.	–	3 50	17 78			
June 16	Same, office supplies, &c.	–	3 52	14 32			
July 5	J. D. Knapp, surveying	–	4 00				
5	J. Breedlove	–	–	8 50			
21	W. Kozer, office furniture, &c.	–	15 19				
Aug. 1	R. K. Deobler	–	–	10 00			
1	Morton & Griswold, stationery, &c.	–	30 00				
13	W. Burket	–	–	–	–	–	250 00
20	W. & A. Wood, camp furniture	–	17 91				
21	B. B. Bridleman, do.	–	3 50				
22	H. R. Green, do.	–	16 50				
22	C. L. Seymour, camp tools, sationery, &c.	–	26 38				
22	Same	–	–	–	–	411 94	
22	W. S. Comstock	–	–	–	–	116 66	

22	J. F. Brown, way expenses	-	14 75	-	-		156 00	
22	W. Hutchinson	-	-	-	25 20			
22	E. Travers	-	-	-	40 00			
22	A. Ritchie	-	-	-	40 00			
22	V. B. Bell	-	-	-	28 00			
22	Gallagher & Co.	$2,060 49						
22	Murphy & Co.	629 21						
22	J. & P. Clark	81 20						
22	E. Clark	176 83						
22	Shannon & Co.	1,867 99						
22	Same	1,503 52						
22	D. Scott	78 00						
22	Rodgers & Co.	988 13						
28	J. Michaels	-	-	3 50				
30	A. West	-	-	4 88				
31	J. Churchill	-	-	6 00				
Sept. 3	A. Ritchie	-	-	2 95				
3	Tuck & Smith	-	-	4 87				
5	T. Hunt	-	-	5 12				
5	S. Spring	-	-	1 80				
10	D. T. M. King	-	-	8 48				
12	F. H. Barnhill	-	-	2 93				
12	A. Haynes	-	-	1 68				
12	J. Brown	-	-	2 65				
13	Wilman & Ridgeway	-	-	1 19				
13	C. Wood	-	-	1 50				
14	W. Farris	-	-	2 00				
14	S. Young	-	-	-	1 13			
15	A. Cone	-	-	1 81				
15	B. Vermilion	-	-	4 00				
15	A. Ritchie	-	-	1 81				
21	T. Bond & Brothers	-	-	2 38				
22	Case & White	-	-	3 54				
22	C. Roberts	-	-	1 81				
24	P. Phelps	-	-	3 21				
25	W. Wilcox	-	-	6 31				
28	A. Huey	-	-	1 13				
28	C. Wilton	-	-	1 00				
28	T. Wilton	-	-	1 36				

STATEMENT No. 1—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Subsistence.	Labor.	Engineering.	Right of way.
1838.							
Sept. 29	A. Ritchie	–	–	$4 12			
29	T. Bond & Brothers	–	–	3 19			
29	Case & White	–	–	2 12			
29	W. Wilcox	–	–	2 56			
Oct. 1	T. J. Bond	–	–	–	$2 13		
1	W. Jones	–	–	7 94			
Aug. 25	P. H. Bagwell, transportation	–	$8 93				$45 00
Sept. 15	T. Arnold	–	–	–	–	–	
Oct. 1	C. L. Seymour, horse	–	55 00				
18	Same, sundries	–	9 19	102 01	10 51		
15	Pay Roll	–	–	–	432 49	$103 80	
Sept. 22	Gallagher & Co.	$1,100 00					
Oct. 15	Murphy & Co.	549 63					
15	E. Clark	1,120 32					
15	J. & P. Clark	206 65					
15	Gallagher & Co.	560 08					
15	E. P. Shannon & Co.	1,022 45					
15	Rodgers & Co.	3,222 12					
15	Gallagher & Co.	1,634 78					
15	E. P. Shannon & Co.	2,636 88					
15	D. Scott	354 69					
July 2	E. Clark	676 39					
2	Murphy & Co.	929 20					
2	J. & P. Clark	204 00					
2	Rodgers & Co.	279 60					
2	E. P. Shannon & Co.	1,081 20					
2	Gallagher & Co.	1,245 60					
2	D. Scott	280 51					
Oct. 30	F. Messer	–	7 50				
30	A. J. Galloway, transportation and camp furniture	–	17 50	37 52	2 63		

Nov.	1	E. Smith, office rent	–		36	00							
	2	J. McDonald, taking releases	–		61	75							
	7	R. Beck, printing	–		7	00							
	17	R. Tilton	–		–		22	25					
	17	A. Ingersoll	–		–		–		4	00			
	17	S. Kneeipp	–		–		–		18	29			
	19	J. Sproull	–		–		–		7	65			
	22	R. Tilton	–		–		12	38					
	22	P. H. Bagwell, transportation	–		8	00							
	22	J. Wheeler	–		–		1	25					
	23	George Rigg	–		–		–		3	85			
	23	A. Frazier	–		–		–		2	00			
	23	C. L. Seymour, saddle, bridle, &c.	–		19	25							
	23	S. Rigg	–		–		5	00					
	25	J. W. Hutchinson	–		–		10	00					
	25	J. Keys	–		–		4	50					
	26	R. K. Deobler	–		–		11	00					
	28	J. Beal, stationery, office and camp furniture	–		74	76							
	30	J. Skeavington	–		–		9	12					
	30	M. Wiley	–		–		–		5	50			
	30	S. Spring	–		–		25	00					
	30	A. Ritchie	–		–		–		7	70			
	30	C. L. Seymour, sundries	–		9	69		94	2	50			
Dec.	1	W. F Brawley	–		–		–		47	15			
	1	M. Bedell, stove and candles	–		36	75							
	1	J. F. Brown, office supplies	–		7	46	–		–		211	20	
	1	H. B. Bell	–		–		12	00	65	33			
	1	A. J. Galloway, transportation	–		4	50		50	–		30	00	
	1	C. L. Seymour	–		–		–		–		421	52	
	1	E. Clark	1,503	80									
	1	Murphy & Co.	1,479	79									
	1	Gallagher & Co.	65	47									
	1	Loveless & Delay, advertising	–		3	50							
	1	J. S. M'Cracken, advertising	–		4	00							
	1	Rodgers & Co.	2,515	75									
	1	E. P. Shannon & Co.	1,953	94									
	1	J. & P. Clark	404	76									
			36,793	38	1,016	67	654	20	1,163	27	2,431	12	878 20

No. 2.

DISBURSEMENTS by M. K. Alexander, Commissioner of the Fourth Judicial Circuit, on the Central Branch Railroad, up to December 1, 1838.

Date.	To whom paid.	Miscellaneous.	Construction.	Transportation.	Subsistence.	Labor.	Engineering.
1837.							
June 9	Blake & Groverman	-	-	-	$20 81		
9	H. Allen	-	-	-	3 00		
15	M. K. & W. Alexander	-	-	-	10 04		
21	U. Davis	-	-	-	-	$7 80	
21	Blake & Groverman	-	-	-	1 50		
21	G. James	-	-	-	-	9 33	
23	J. Langdon	-	-	$5 50	1 12		
24	B. Allen	-	-	-	3 00		
24	G. W. Haws	-	-	-	-	6 00	
30	A. Cunningham	-	-	-	-	13 80	
July 5	A. W. Hoyt	-	-	-	13 50		
1	A. Bielaski	-	-	7 00	12 87		
1	C. S. Williams	-	-	-	-	-	$29 04
1	A. Bielaski	-	-	-	-	-	69 32
1	R. J. Cleavland	-	-	-	-	-	90 41
1	Same	-	-	-	3 47		
1	Pay Roll	-	-	-	-	148 93	
1	T. Campble	-	-	-	-	1 00	
1	R. M'Clintock, hire of team	-	-	40 00			
5	W. B. Vance	-	-	-	33 19		
4	C. S. Williams	-	-	4 75			
5	W. French	-	-	-	-	1 20	
19	W. B. Vance	-	-	-	18 96		
August 1	C. S. Williams	-	-	-	-	-	31 68

	1	M. K. & W. Alexander	-	-	-	-	-	42 44		
	1	Pay Roll	-	-	-	-	-	-	159 72	
	1	A. Bielaski	-	-	-	-	-	43 40		
	1	Same	-	-	-	-	-	-	-	91 67
	5	B. Whalen	-	-	-	-	-	-	2 62	
July	15	J. M. Archer	-	-	-	-	-	22 78		
	15	R. B. Owings & Co.	-	-	-	-	-	5 60		
August	21	T. Foster	-	-	-	-	-	4 31		
	1	J. K. Rychlicki	-	-	-	-	-	-	-	31 25
	31	W. Rieves	-	-	-	-	-	20 47		
Sept.	5	Pay Roll	-	-	-	-	-	-	142 66	161 53
	6	A. Bielaski	-	-	-	-	-	69 94		
	30	Poy Roll	-	-	-	-	-	-	167 23	216 67
Oct.	2	C. T. Arms, jr.	-	-	-	-	-	102 41	10 38	
	2	Wm. Rieves	-	-	-	-	-	8 57		
Nov.	4	G. Fuller	-	-	-	-	5 10			
	9	Pay Roll	-	-	-	-	-	-	190 80	216 67
	9	C. T. Arms, jr.	-	-	-	-	-	107 68	9 75	
	9	Wm. Rieves	-	-	-	-	-	17 88		
	10	M. K. & W. Alexander	-	-	-	-	-	17 00		
	10	Pay Roll	-	-	-	-	-	-	93 00	65 00
	9	C. T. Arms, jr.	-	-	-	-	-	33 08		
Dec.	25	J. Sandford, agency	-	-	$12 50					
1838.										
Jan.	1	William Rieves	-	-	-	-	-	20 00		
	1	C. S. Williams	-	-	-	-	-	4 29	-	23 76
	1	Same	-	-	-	-	3 41			
	5	Wm. Rieves, depot	-	-	45 00					
	18	Vance & Russell	-	-	-	-	-	3 85		
Feb.	1	Pay Roll	-	-	-	-	-	-	62 22	170 84
	1	A. Bielaski	-	-	-	-	9 13	16 56	21 63	
	7	W. Rieves	-	-	-	-	-	39 43		
March	1	C. T. Arms, level	-	-	130 00					
	1	J. & T. Dowling, printing	-	-	13 00					
	1	Pay Roll	-	-	-	-	-	-	58 20	170 84
	1	C. S. Williams	-	-	-	-	-	15 01	3 50	
	5	Loveless & Delay, printing	-	-	37 83					
April	1	Pay Roll	-	-	-	-	-	-	42 68	170 84
	1	C. S. Williams	-	-	-	-	2 50	24 15	7 45	

STATEMENT No. 2—Continued.

Date.	To whom paid.	Miscellaneous.	Construction.	Transportation.	Subsistence.	Labor.	Engineering.
1838.							
March 5	Loveless & Delay, printing	$8 00					
April 3	J. M. Archer	-	-	-	$66 75		
25	A. B. Lycan, right of way	25 00					
24	Wm. Rieves	-	-	-	21 00		
30	J. Cummins, right of way	50 00					
May 1	A. W. Hoyt	-	-	-	-	-	$123 29
1	Pay Roll	-	-	-	-	$102 33	170 84
1	C. S. Williams, stationery	10 13	-	$1 00	10 59		
1	Stark & How	-	$635 05				
1	J. W. M'Reynolds & Co.	-	540 15				
1	James Ryan	-	731 47				
2	J. Donegan	-	145 00				
2	J. W. M'Reynolds & Co.	-	274 15				
2	M'Farland & Co.	-	524 24				
2	J. M. Archer	-	-	-	59 70		
2	J. L. Burleigh	-	255 00				
2	D. Scott	-	1,081 22				
2	J. R. Lee & Co.	-	531 48				
2	S. & G. Ewing	-	54 88				
10	R. Steel, agency	9 75					
10	W. Walters, printing	12 50					
8	P. Whalen, right of way	10 00					
8	W. Johnson, right of way	5 00					
14	S. Davis, right of way	50 00					
June 1	J. M. Archer	-	-	-	56 50		

	1	C. S. Williams, stationery	-	-	2 12	-	-	-	6 81		
	1	Pay Roll	-	-	-	-	-	-	103 54	170 84	
Jan.	8	G. Fuller	-	-	-	-	3 50	1 25	75		
June	15	J. Donegan	-	-	-	358 44					
	15	J. L. Burleigh	-	-	-	121 73					
	15	Same	-	-	-	1,053 71					
	15	Stark & How	-	-	-	800 53					
	15	J. Ryan	-	-	-	792 79					
	15	J. W. Brown	-	-	-	590 70					
	15	Same	-	-	-	140 67					
	15	J. W. M'Reynolds & Co.	-	-	-	723 03					
	15	Same	-	-	-	420 95					
	15	S. &. G. Ewing	-	-	-	122 70					
	15	Rays & Ewings	-	-	-	59 82					
8	15	D. Scott	-	-	-	484 92					
	15	Same	-	-	-	2,093 59					
	15	Hendrickson & Co.	-	-	-	1,304 00					
	15	Paddock & Co.	-	-	-	128 34					
	2	W. Hessin, printing	-	-	12 50						
	22	Pay Roll	-	-	-	-	-	-	41 06		
July	14	J. M. Archer	-	-	-	-	-	42 00			
Aug.	1	J. L. Burleigh	-	-	-	1,248 38					
	1	D. Scott	-	-	-	2,023 54					
	1	J. W. Brown	-	-	-	180 28					
	1	Hendrickson & Co.	-	-	-	948 27					
	1	J. W. M'Reynolds & Co.	-	-	-	422 73					
	1	Paddock & Co.	-	-	-	205 21					
	1	J. Donegan	-	-	-	204 12					
	1	J. W. M'Reynolds & Co.	-	-	-	419 06					
	1	Stark & How	-	-	-	821 82					
	1	S. & G. Ewing	-	-	-	301 83					
	1	T. H. Cushing	-	-	-	2,414 52					
	1	Wm. Rieves	-	-	-	-	-	36 60			
	1	C. S. Williams, stationery	-	-	2 75	-	5 50	1 37	13 58		
	1	A. Bielaski	-	-	-	-	-	66 59			
	1	Pay Roll	-	-	-	-	-	-	157 13	341 66	
Sept.	18	D. Scott	-	-	-	1,798 79					
	18	J. W. M'Reynolds & Co.	-	-	-	826 09					
	18	Same	-	-	-	407 12					

STATEMENT No. 2—Continued.

Date.	To whom paid.	Miscellaneous.	Construction.	Transportation.	Subsistence.	Labor.	Engineering.
1838.							
Sept. 18	J. Donegan	-	$100 93				
18	Stark & How	-	1,092 59				
18	S. & G. Ewing	-	80 92				
18	Paddock & Co.	-	414 86				
21	J. L. Burleigh	-	301 75				
19	Carey & Co.	-	215 67				
Aug. 10	James Ryan	-	360 68				
16	Hendrickson & Co.	-	972 34				
Sept. 27	Loveless & Delay, printing	$26 17					
5	Pay Roll	-	-	-	-	$180 34	$170 83
5	C. S. Williams	-	-	$16 25	$5 61	3 75	
30	William Rieves	-	-	-	40 95		
27	G. B. Webber, printing	12 00					
28	James Ryan	-	572 93				
Oct. 1	C. S. Williams	-	-	9 25	4 00	8 90	
1	Pay Roll	-	-	-	-	85 53	227 49
9	H. K. Brown	-	-	17 50	126 88	26 05	
1	Looker & Ramsey, printing	20 00					
Nov. 1	D. Scott	-	1,069 63				
1	Same	-	1,165 30				
1	J. L. Burleigh	-	1,291 58				
1	Stark & How	-	749 59				
1	C. G. Van Buren	-	85 50				
1	S. & G. Ewing	-	458 27				
1	Carey & Co.	-	640 89				
1	Jackson & Co.	-	201 53				

1	J. W. Brown	-	-	-	501 36				
1	J. W. M'Reynolds	-	-	-	595 28				
1	Cushing & Blake	-	-	-	1,525 52				
23	J. L. Burleigh	-	-	-	1,155 25				
1	Pay Roll	-	-	-	-	-	-	36 12	83 46
1	C. S. Williams	-	-	-	-	28 50	59 47	10 75	
1	Wm. Rieves	-	-	-	-	-	9 90		
1	Pay Roll	-	-	-	-	-	20 00	20 00	62 50
1	M. K. Alexander, office rent, &c.	-	-	77 54	-	-	8 40		
				571 79	39,742 70	158 89	1,377 87	1,956 64	2,890 43

No. 3.

DISBURSEMENTS made by M. K. Alexander, Commissioner of the Board of Public Works of the State of Illinois, up to December 1, 1838, on the Northern Cross Railroad.

Date.	To whom paid.	Construction.	Miscellaneous.	Transportation.	Subsistence.	Labor.	Engineering.
1837.							
Aug. 1	Pay Roll					$158 91	$187 50
1	R. J. Cleveland				$66 40		
1	J. R. Moores				26 37		
5	B. Whalen					3 25	
7	N. Shoaff					4 00	
20	C. S. Williams			$2 56	2 75		
Sept 1	Pay Roll					153 69	228 42
1	R. J. Cleveland			12 00	90 60		
5	Martin Ray				2 00		
27	C. S. Williams			3 50		1 50	
27	Same						35 64
Oct. 2	S. Averill			6 75			
Sept. 27	Pay Roll					43 16	
Oct. 1	Pay Roll					136 56	187 50
1	R. J. Cleveland				107 53		
6	J. R. Moores, agency		$4 00				
2	W. Rieves				11 86		
Nov. 4	Pay Roll					129 02	189 12
4	R. J. Cleveland			11 56	75 57		
4	W. & M. Haws					6 40	
Dec. 10	R. J. Cleveland			3 50			
1838.							
Jan. 1	C. S. Williams				4 58		26 40
26	A. & W. Edwards					2 00	
Feb. 7	Wm. Rieves			5 62	5 38		
26	A. W. Hoyt, printing		12 32				
28	C. T. Arms				88 75		
28	Pay Roll					131 36	92 74
28	C. T. Arms, for office, Danville		36 06	5 00	104 71	3 00	
28	Pay Roll					184 19	125 00
March 2	M. K. & W. Alexander				4 45	7 25	

	5	Loveless & Delay, printing	-	-	-	36 83				
	31	C. T. Arms, for office	-	-	-	17 00	-	99 30	7 50	
April	2	Pay Roll	-	-	-	-	-	-	138 65	125 00
May	1	Do.	-	-	-	-	-	-	131 85	125 00
	1	C. T. Arms, for office	-	-	-	2 94	9 37	85 18		
	1	A. W. Hoyt	-	-	-	-	-	-	-	123 29
	28	Patterson & Jackson, right of way	-	-	-	150 00				
	28	Osbourn & Alexander, right of way	-	-	-	150 00				
	29	Pay Roll	-	-	-	-	-	-	119 74	125 00
	29	C. T. Arms, for office	-	-	-	13 56	2 50	88 62		
June	1	A. W. Hoyt	-		-		-	-	-	131 50
May	20	J. Wentworth, advertising	-	-	-	12 50				
June	15	H. K. Brown	-	-	-	-	-	-	-	50 00
	15	M'Kibben & Co.	-	-	$1,931 92					
	15	M. L. Payne	-	-	699 53					
	15	Stoughton & Co.	-	-	1,476 14					
August	1	Same	-	-	2,521 47					
	1	M'Kibben & Co.	-	-	3,966 71					
	1	Breed & Co.	-	-	3,946 48					
	1	M. L. Payne	-	-	204 21					
	1	C. T. Arms, for office and rope for ferry	-		-	36 46	13 37	241 02	26 50	
	4	Pay Roll	-	-	-	-	-	-	131 93	350 00
	1	T. H. Cushing	-	-	994 29					
Sept.	15	Breed & Co.	-	-	1,320 42					
	15	Stoughton & Co.	-	-	2,108 40					
	15	M'Kibben & Co.	-	-	2,472 14					
	15	M. L. Payne	-	-	126 65					
	15	T. H. Cushing	-	-	759 25					
	26	T. Tennery, agency	-	-	-	12 50				
Nov.	1	Pay Roll	-	-	-	-	-	-	116 65	475 00
	1	J. R. Moores, agency	-	-	-	10 00	8 00			
	1	Stoughton & Co.	-	-	203 85					
	1	Same	-	-	4,151 82					
	1	T. H. Cushing	-	-	1,974 24					
	1	M'Kibben & Co.	-	-	2,525 31					
	1	Morgan L. Payne	-	-	197 62					
	1	Breed & Co.	-	-	855 19					
	6	C. T. Arms, for office &c.	-	-	-	52 14	29 03	156 32		
					32,435 64	546 31	112 76	1,261 39	1,637 11	2,577 11

No. 4.

DISBURSEMENTS made by M. K. Alexander, Commissioner of the Fourth Judicial Circuit, on the Central Railroad, up to December 1, 1838.

Date.	To whom paid.	Transportation.	Miscellaneous.	Subsistence.	Labor.	Engineering.
1837.						
Nov. 24	Pay Roll . .	–	–	–	$136 03	$212 33
25	R. J. Clevelend, hatchet .	$6 25	$1 50	$104 96	7 69	
30	Pay Roll . .	–	–	–	110 07	151 67
Dec. 4	J. K. Rychlike . .	–	–	–	–	22 60
5	C. T. Arms, jr. . .	12 00	–	81 00		
1838.						
Jan. 1	Wm. Rieves . .	–	–	14 00		
4	R. J. Cleveland . .	–	–	–	–	156 18
8	Pay Roll . .	–	–	–	193 04	216 67
8	Do. . .	–	–	–	37 66	32 22
8	A. Bielaski . .	6 75	–	2 75		
10	C. T. Arms, jr. . .	13 75	–	150 66	5 38	
May 15	A. W. Hoyt. . .	–	–	–	–	123 26
Nov. 15	A. Bielaski . .	–	–	–	–	162 50
	Total . .	38 75	1 50	353 37	489 87	1,077 43

No. 5.

DISBURSEMENTS made by M. K. Alexander, Commissioner of the Fourth Judicial Circuit, on the Great Western Mail Route.

Date.	To whom paid.	Construction.	Miscellaneous.	Labor.	Subsistence.	Engineering.	Transportation.
1837.							
Sept. 19	E. Stout, advertising and other printing	–	$41 75				
28	Loveless & Delay, advertising	–	4 00				
Nov. 11	Rodgers & Albright	$2,324 33					
25	G. Davis	211 26					
25	Wheeler & Co.	1,490 06					
27	Nabb & Reiley	1,987 26					
Sept. 23	Matson & Leech	–	–	$3 00			
23	N. Johnson	–	–	–	$3 88		
23	R. Tilton	–	–	13 75			
23	L. Goodrich	–	–	3 00			
23	E. Mays	–	–	–	3 50		
27	B. B. Marney	–	–	–	2 50		
30	J. C. Reiley	–	–	–	–	–	$2 00
30	A. Gibson	–	–	–	–	–	1 50
30	B. B. Marney	–	–	–	2 25		
Oct. 3	J. Nelson	–	–	2 50			
3	E. Nelson	–	–	–	2 00		
8	J. M'Cawley	–	–	–	3 00		
11	J. Golden	–	–	1 25			
13	B. W. Lesley	–	–	–	–	–	87
14	M. Tully	–	–	–	–	–	6 00
14	W. Terrel	–	–	–	7 63		
Sept. 18	W. H. Twiss	–	–	–	–	–	4 75

STATEMENT No. 5—Continued.

Date.	To whom paid.	Construction.	Miscellaneous.	Labor.	Subsistence.	Engineering.	Transportation.
1837.							
Sept. 20	B. W. Lester	-	-	-	-	-	$5 00
27	C. Mires	-	-	$0 87			
30	J. S. Schuler	-	-	-	$3 00		
Nov. 7	C. Ridgeway	-	-	-	9 00		
27	E. K. Smith	-	-	20 00			
1838.							
Jan. 2	Rodgers & Albright	$1,392 20					
8	W. H. Stickney, advertising	-	$7 50				
24	Wheeler & Dubois	486 88					
24	Geo. Davis	72 25					
31	Rogers & Albright	654 42					
31	Same	136 93					
March 10	Same	191 25					
10	Same	670 11					
May 16	Same	1,287 46					
16	Same	510 00					
18	Wheeler & Dubois	126 45					
18	Reiley & Co.	755 60					
18	W. F. Beach	-	-	-	14 75	-	1 00
June 2	W. Hessin, advertising	-	9 00				
6	W. Walters, do.	-	9 00				
7	Rodgers & Albright	1,219 48					
14	C. L. Seymour	-	-	-	10 75		
July 2	Reiley & Co.	711 07					
Aug. 10	Loveless & Delay, advertising	-	8 50				
July 2	W. F. Beach	-	-	-	10 13		

	2	Same	-	-	-	8 75	-	3 62
Aug.	22	Same	-	-	-	-	$240 50	
	22	H. O. Terrel	-	-	90 00	32 50		
	22	A. Ritchie	-	-	20 00			
	22	Wheeler & Co.	1,167 77					
	22	Reiley & Co.	1,049 96					
	22	Rodgers & Albright	513 84					
	23	W. F. Beach, printing $5, hatchet $1 50	-	$6 50	10 75	77 78		
July	2	Rodgers & Albright	495 30					
	2	Same	1,673 25					
	2	Wheeler & Co.	427 21					
Oct.	13	Rodgers & Albright	685 95					
	13	Reiley & Co.	1,096 51					
	13	Baker & Mays	124 10					
	13	Leach & Co.	35 35					
	13	Baird & Co.	93 60					
	13	Wheeler & Co.	1,300 52					
Sept.	27	Loveless & Delay, advertising	-	8 50				
Nov.	12	E. Smith, horse	-	60 00				
	27	J. Whittaker	-	-	4 50			
Dec.	1	W. S. Comstock	-	-	-	-	163 50	
	1	H. O. Terrell	-	-	99 00	41 50		
	1	P. H. Bagwell	-	-	-	-	-	31 12
	1	Wheeler & Co.	832 96					
	1	Reiley & Co.	416 22					
	1	G. Davis	232 94					
	1	Baker & Mays	505 72					
	1	W. F. Beach	20 00	-	-	-	175 00	
	1	U. Mills	164 80					
	1	Baird & Co.	108 61					
	1	Leach & Co.	9 12					
Nov.	30	C. L. Seymour	-	-	-	3 38		
Dec.	1	Rodgers & Albright	721 82					
	1	J. G. Barclay	-	-	49 08	13 26	-	20 75
	1	Wm. Cooper	214 12					
	1	E. Peck, level	130 00					
			26,246 68	154 75	317 70	249 56	579 90	76 61

No. 6.

DISBURSEMENTS by M. K. Alexander, Commissioner of the Fourth Judicial Circuit, on the Great Wabash.

Date.	To whom paid.	Construction.	Miscellaneous.	Labor.	Subsistence.	Engineering.	Transportation.
1837.							
Oct. 24	Christian Scitz	-	-	$5 50			
24	George Snider	-	-	1 25			
24	George Keestine	-	-	2 50			
24	Philip Nazer	-	-	1 25			
24	John Tilton, provisions for party opening quarry	-	-	-	$26 41		
Nov. 2	Isaac Wilson	-	-	31 25			
2	Same	-	-	-	15 00		
2	Same	-	-	6 25	-	-	$1 81
15	Alexander Cooper	-	-	45 88			
15	Christian Scitz	-	-	28 50			
15	Alexander Cooper	-	-	-	12 00		
15	Philip Nazer	-	-	1 00			
15	Christian Scitz	-	-	1 00			
15	William Stewart	-	-	60 00			
17	S. Sheiefer	-	-	2 12			
17	Moses Bedell, ticking, candles and candlesticks	-	$5 62				
15	Alexander Cooper	-	-	-	4 25		
17	Same, sundry articles, see voucher	-	4 88	22 00	11 55	-	8 13
24	D. Burr	-	-	-	-	$434 69	
Oct. 21	Loveless & Delay, advertising	-	5 00				
Nov. 27	Christian Scitz	-	-	1 50			
29	Edward K. Smith	-	-	-	-	15 00	
29	G. C. Turner, clerk's salary	-	20 00				
29	Robert Williams	-	1 50				
Dec. 2	Thomas M. Waugh, copying report	-	5 12				
4	George Ledgier	-	-	1 00	-	-	1 50
5	W. Walters, advertising	-	5 00				
9	John W. Wentworth, advertising	-	5 00				
15	Wiley Ford	-	-	1 00			

Feb. 28	Richard Beck, publishing notice	-	3 00					
28	Moses Bedell, office rent and supplies	-	37 88					
28	D. Burr	-	-	-	-	500 00		
28	Alexander Cooper	-	-	75 00				
28	Same	-	2 37	-	39 00			
March 5	Morton & Griswold, stationery	-	124 18					
April 16	George Ledgier, storage	-	2 00					
May 7	Douglass & Noel, printing	-	3 75					
15	Alexander Cooper	-	-	75 00				
15	Same	-	-	-	39 00			
June 18	John Banks	-	-	2 00				
19	John H. Davis	-	-	1 00				
August 1	P. H. Bagwell	-	-	-	-	-	13 50	
31	D. Burr	-	-	-	-	500 00		
Sept. 1	Alexander Cooper	-	-	87 50				
August 31	Edward K. Smith	-	-	-	-	118 75		
31	Same	-	-	-	55 50			
July 2	J. L. Wilson & Co.	$2,316 00						
August 9	Morton & Griswold, stationery	-	8 50					
10	Loveless & Delay, advertising	-	5 00					
31	Washington Riggans	-	-	7 50				
Sept. 1	Alexander Cooper, stationery	-	7 31	13 13	50 50	-	42 15	
Oct. 4	James Stewart, soap and canoe	-	6 50	26 00	26 00	-	2 75	
15	William Pursell	-	-	-	8 75	-	75	
16	Moses Bedell, tools and camp furniture	-	12 33	-	38 69			
17	Garlant T. Neusum	-	-	-	8 90			
Nov 12	Benjamin L. Eaton, cord for tent	-	56	32 50	41 76	-	1 00	
23	John M. Hinde	-	-	35 00	1 71	-	2 88	
23	Alexander Cooper	-	75	-	12 56			
23	H. H. Bedell	-	-	60 50	30 43	-	7 09	
30	Alexander Cooper, stationery	-	1 75	12 10	36 05	105 00		
30	Edward K. Smith	-	57	3 00	32 87	105 00	24 62	
30	Moses Bedell, rent of office, &c.	-	55 50					
30	D. Burr	-	-	-	-	500 00		
		2,316 00	324 07	642 23	490 93	2,303 44	106 09	

No. 7.

DISBURSEMENTS by M. K. Alexander, Commissioner of the Board of Public Works of the State of Illinois, for the Fourth Judicial Circuit, under the head of General Expenditure.

Date.	To whom paid.	Miscellaneous.	Office furniture and supplies.	Subsistence.	Camp furniture.	Engineers' compensation.	Transportation.	Engineering instruments.	Stationery.
1837.									
May 9	B. Loring & Co.	–	–	–	–	–	–	–	$62 38
9	Same	–	–	–	–	–	–	–	1 50
10	J. Marsh	–	–	–	–	–	–	–	9 10
17	O. Kilbourn	–	–	–	–	–	–	$5 74	
22	Stockton & Co.	–	–	–	–	–	$6 30		
22	J. W. Hager	–	–	–	–	–	–	87 25	
July 1	A. Bielaski	–	–	–	–	–	17 00	1 50	
June 8	Same	–	–	–	–	$108 49			
July 1	R. J. Cleveland	–	–	–	–	98 63			
June 6	C. A. Sheldon	–	–	–	–	–	3 68		
8	D. Rankin	–	–	–	–	–		3 00	
8	E. M. & J. O. Jones	–	–	–	$14 00				
8	R. Thirwell	–	–	–	21 00				
8	C. S. Williams	–	–	–	–	30 36			
9	H. Fairbanks	–	–	–	–	–	–	10 50	
9	Beymour & Co.	–	–	–	2 45				
9	C. S. Williams	–	–	–	1 14	–	1 25	2 12	
9	M'Gregor & Co.	–	–	–	5 25				
10	C. H. Bailey	–	–	–	42 92				
1	M. K. & W. Alexander	–	–	–	142 18				
1	J. F. Cruft	–	–	–	27 00				
18	C. S. Williams	–	–	–	–	–	1 87	–	2 25

	17	J. C. Essery, wagon, &c.	$140 00								
	16	W. Rieves, two horses	140 00								
	21	Beymour & Co.	-	-	-	62					
	21	G. Fuller	-	-	$4 61	-	-	4 00			
	27	H. Fairbanks	-	-	-		-	-	2 50		
	8	M. Morgan	-	-	-	17 81					
	18	R. Carey	-	-	17 50	-	-	7 50			
July	1	A. W. Hoyt	-	-	-	-	501 37				
	1	Same	-	-	-	-	-	2 50	9 50	2 00	
	1	R. M. Ewing, one horse	75 00								
	4	G. Cook, wagon, &c.	122 00								
	4	Jas. Bailey, horse	55 00								
May	21	A. Williams	-	-	-	17 00					
June	8	M. Morgan	-	$7 19							
	10	Loveless & Delay, printing	6 00								
	10	J. Sheriff	-	-	-	15 50					
	10	J. R. Moores	-	-	-	39 50					
	15	J. B. Crawford	-	-	-	16 00					
	7	J. Jones	-	-	-	38 73					
July	15	J. M. Archer	-	-	-	-	-	8 59			
	15	C. A. Sheldon	-	-	17 19	-	-	32 50	17 00		
	16	E. D. F. Reed	-	-	-	7 50					
	19	J. Vance	-	-	-	2 25					
Aug.	1	A. Bielaski	-	-	-	16 44					
	1	M. K. & W. Alexander	-	-	-	22 00					
	1	H. Nevill	-	-	-	25 81					
	1	A. W. Hoyt	-	-	-	-	254 79				
	1	Same	-	-	5 58	1 12	-	10 50	-	8 62	
	1	M. K. & W. Alexander	-	1 56	-	-	-	-	-	7 50	
	1	A. Bradley	-	-	-	5 50					
	1	J. R. Moores	-	-	-	18 75					
	1	R. J. Cleveland	-	-	-	28 65	-	1 00	2 00	1 12	
	14	A. W. Hoyt	-	-	-	-	-	-	178 50		
Sept.	1	Same	-	-	-	-	254 79				
	5	Same	-	-	4 17	-	-	27 50			
	5	C. T. Arms	-	-	-	-	102 75				
	6	A. Bielaski	-	-	-	10 00					
	6	Same	-	-	-	80 97					
	1	R. J. Cleveland	-	-	-	6 83					
	5	R. C. Arms, service	15 70								

STATEMENT No. 7—Continued.

Date.	To whom paid.	Miscellaneous.	Office supplies and furniture.	Subsistence.	Camp furniture.	Engineers' compensation.	Transportation.	Engineering instruments.	Stationery.
1837.									
Sept. 27	A. W. Hoyt	-	-	-	-	$221 91			
27	Same	-	-	$4 86	-	-	$10 25	-	$2 27
Oct. 2	M. K. Alexander, compensation	$770 00							
2	C. T. Arms	-	-	-	$6 76	-	13 50	-	23 48
1	R. J. Cleveland	-	-	-	90 44				
Nov. 4	Same, exchange of horses	25 00	-	-	29 00				
9	C. T. Arms	-	$2 00	-	8 80	-	-	$3 00	6 50
10	M. K. & W. Alexander	-	18 91	-	-	-	-	-	3 94
10	M. K. Alexander, compensation	150 00							
25	A. W. Hoyt	-	-	-	-	-	-	180 02	95 24
25	Same	-	-	-	-	-	32 29		
Dec. 2	J. K. Richliki	-	-	-	-	-	-	25 00	
5	C. T. Arms,	2 62	11 38	-	32 62	-	-	-	1 00
1838.									
Jan. 1	A. W. Hoyt, postage	2 00	-	11 42	-	361 64	22 50		
6	M. K. Alexander, compensation	305 00							
8	M. K & W. Alexander	-	58 19						
6	A. Williams	-	-	-	-	-	-	11 50	
9	J. B. Crawford	-	-	-	3 50				
10	C. T. Arms	-	-	18 25	47 55	-	-	10 00	
24	J. Craig	-	3 12						
25	B. Whalen	-	-	-	-	-	-	12 50	
26	R. J. Cleveland	-	5 00						
31	A. W. Hoyt	-	-	-	-	254 80			
Feb. 1	A. Bielaski	-	-	-	-	-	-	25 00	
March 2	M. K. & W. Alexander	-	61 96						

April	1	A. W. Hoyt	-	-	-	-	427 44	$3 50		
May	1	Same	-	-	-	-	-	6 00		
June	1	M. K. Alexander, compensation	695 00							
	1	M. K. & W. Alexander	-	37 69	-	-	-	-	-	6 56
Aug.	1	C. S. Williams	-	-	-	-	-	-	-	55 50
	1	A. W. Hoyt	-	-	-	-	501 36			
	1	Same	-	-	-	-	-	-	144 84	17 25
	1	Same	-	-	5 74	-	-	25 50	-	4 62
	1	M. K. Alexander, compensation	275 00							
	1	A. Bielaski	-	-	-	55 98				
Sept.	19	R. J. Cleveland	-	-	-	-	-	-	100 00	
Oct.	1	A. W. Hoyt, letter postage from Jan. 1st	9 10	-	-	-	501 37	14 73		
Nov.	1	Same	-	-	-	-	254 82	2 25		
	2	M'Gregor & Rea	-	25 37						
	9	A. Bielaski	-	-	-	-	-	-	20 00	
Dec.	1	A. W. Hoyt	-	-	-	-	246 56	15 47		
	1	M. K. Alexander, compensation	600 00							
	1	Same, postage	22 69							
			3,410 11	232 37	89 32	901 57	4,121 08	270 18	851 47	310 83

RECAPITULATION.

No.	Works.	Construction.	Labor.	Engineers' salaries.	Subsistence.	Camp furniture.	Office furniture and supplies.
1	Southern Cross railroad, from Alton to Mt. Carmel -	$36,793 38	$1,163 27	$2,431 12	$653 20		
2	Central Branch railroad - -	39,742 70	1,956 64	2,890 43	1,377 87		
3	Northern Cross railroad - -	32,435 64	1,637 11	2,577 87	1,261 39		
4	Central railroad - -	–	489 87	1,077 43	353 37		
5	Great Western mail route - -	26,246 68	317 70	579 00	249 56		
6	Great Wabash - -	2,316 00	642 23	2,308 44	490 93		
7	General Expenditure - -	–	–	4,121 08	89 32	$901 57	$232 37
		137,534 40	6,206 82	15,984 61	4,476 64	901 57	232 37

RECAPITULATION—Continued.

No.	Works.	Transportation.	Engineering instruments.	Stationery.	Miscellaneous.	Right of way.	Aggregate amount.
1	Southern Cross railroad, from Alton to Mt. Carmel -	–	–	–	$1,016 67	$878 20	$6,143 46
2	Central Branch railroad - -	$158 89	–	–	571 79	–	6,955 62
3	Northern Cross railroad - -	112 76	–	–	546 31	–	6,134 68
4	Central railroad - -	38 75	–	–	1 50	–	1,960 92
5	Great Western mail route - -	76 61	–	–	154 75	–	1,377 62
6	Great Wabash - -	106 09	–	–	324 07	–	3,871 76
7	General Expenditure - -	270 18	$851 47	$310 83	3,410 11	–	10,186 93
		763 28	851 47	310 83	6,025 20	878 20	36,630 99

No. 8.

AN EXHIBIT of the number of Engineers employed, rates of compensation, aggregate amount paid them, &c. in the Eastern Engineering District, also including that portion of the Fourth Judicial Circuit under the supervision of the undersigned, lying in the Southern Engineering District, up to December 1, 1838.

Names of Engineers.	When employed.	Salary per year.	Amount paid on different works.						General Expenditure.	Total.	Total amount paid.
			Northern Cross Railroad.	Central Branch Railroad.	Central Railroad.	Alton and Mt. Carmel Railroad.	Great Western M. Route.	Great Wabash.			
Arthur W. Hoyt	May 1, 1837	$3,000	$254 79	$123 29	$123 26	-	-	-	$3,780 85	-	$4,282 19
C. T. Arms, jr.	July 19, 1837	1,500	1,217 74	357 36	244 72	-	-	-	102 75	-	*a* 1,922 57
R. J. Cleveland	May 15, 1837	1,500	483 31	90 41	272 84	-	-	-	98 63	-	*b* 945 19
Alexander Bielaski	May 3, 1837	1,100	-	463 50	155 84	-	-	-	108 49	*c* $727 83	
Same	Jan'y 1, 1838	1,300	-	975 02	162 50	-	-	-	-	1,137 52	
											1,865 35
J. K. Rychlicki	June 15, 1838	750	241 65	31 25	80 93	-	-	-	-	-	*d* 353 83
C. S. Williams	May 16, 1837	480	129 62	84 48	37 33	-	-	-	30 36	*e* 281 79	
Same	Jan'y 1, 1838	750	-	687 50	-	-	-	-	-	687 50	
											969 29
R. C. Arms	June 1, 1838	600	100 00	-	-	-	-	-	-	-	*f* 100 00
H. K. Brown	May 1, 1838	600	150 00	77 62	-	-	-	-	-	-	*g* 227 62
D. Burr	July 7, 1837	2,000	-	-	-	-	-	$1,934 69	-	-	1,934 69
C. L. Seymour	Dec. 13, 1837	1,500	-	-	-	1,458 46	-	-	-	-	*h* 1,458 46
W. S. Comstock	June 13, 1838	600	-	-	-	116 66	$163 50	-	-	-	280 16
W. F. Beach	Dec. 20, 1837	900	-	-	-	355 00	415 00	-	-	-	*i* 770 00
A. J. Gallaway	Aug. 13, 1838	600	-	-	-	133 80	-	-	-	-	*k* 133 80
J. F. Brown	June 8, 1838	750	-	-	-	367 20	-	-	-	-	367 20
Edward K. Smith	Nov. 16, 1837	420	-	-	-	-	-	268 75	-	-	268 75
Alexander Cooper	Sept. 1, 1838	480	-	-	-	-	-	105 00	-	-	105 00
	Total	-	2,577 11	2,890 43	1,077 42	2,431 12	578 50	2,308 44	4,121 08	-	15,984 10

a Paid to Nov. 1, 1838. *b* Left service Jan. 1, 1838. *c* Paid to Jan. 1, 1838. *d* Left service Dec. 4, 1837. *e* Paid to Jan. 1, 1838. *f* Paid to Nov. 1, 1838. *g* Left service October 1, 1838. *h* Left service December 1, 1838. *i* Left service Nov. 1, 1838. *k* Left service, Nov. 1, 1838.

REPORT

OF

THE COMMISSIONER OF THE FIFTH JUDICIAL CIRCUIT.

VANDALIA, *December* 27, 1838.

To the PRESIDENT *of the Board of Public Works:*

SIR: In accordance with an order of the Board, I submit the following statement respecting the public works under my control, to enable the Board to comply with the requisitions of the resolutions passed at the present session of the General Assembly.

The public works contemplated in the fifth judicial circuit are, the Peoria and Warsaw railroad, from the west line of Peoria county to Warsaw; that part of the Northern Cross railroad between the Illinois and Mississippi rivers; and the improvement of the navigation of the Illinois river through this circuit.

That part of the Illinois river above the mouth of the Sangamon river was, by order of the Board, placed under the joint direction of the Commissioner of the seventh circuit and myself. The last report of the Board to the Governor shows the progress made in this part of the public service.

By an order of the Board, that part of the Peoria and Warsaw railroad lying in the sixth judicial circuit, was placed under my control; and, by an order made at the session in June last, that part of the Northern Cross railroad in the fifth circuit was placed under the direction of the Commissioner of the first circuit, so that the operations under my direction embrace the whole of the Peoria and Warsaw railroad, and that part of the Western Cross railroad above specified, previous to the first day of June last.

The reports of the Board to the Governor, which are in possession of the Legislature, show the progress and condition of these works, the amount of money expended on each, and the number of miles let on each.

By schedules numbered 1 and 2, annexed to my report of the current month, which is appended to the last report of the Board, it appears that the cost of the work done on the eastern division of the Peoria and Warsaw road, the grading, bridging and masonry of which are let to contract, being 12 miles long, is $41,964 41

The cost of work to be done on the same	51,524 07
Making the cost of the road-bed	93,488 48
To this add, for 12 miles of superstructure, say	60,000 00
Makes the whole cost of the road	153,488 48
Being an average per mile of	$12,790 70

The cost of the work done on the western division of this road, is	$19,439 07
The cost of work to be done on the same - -	37,389 83
Making the cost of the road-bed - - -	56,828 90
Add, for 12 miles of superstructure, say - -	60,000 00
Makes the whole cost of the road - - -	116,828 90
Being an average per mile of - - -	$9,735 74

The length of the roads as ascertained by the surveys, the estimated expense of constructing the same, and the distance between each point named in the internal improvement act, are given in the report of the Board above alluded to. The amount of money drawn by me from the Fund Commissioners, the aggregate amount expended by me, and the amount expended on each work, are given in my report to the Board, annexed to the said report.

The following statement will show, as nearly as I can do so from data in my possession here, the different purposes for which money has been expended by me. Vouchers, specifying for what purpose all moneys were paid, have been filed in the Fund Commissioners' office at different periods of time, accompanied with an account current. This statement is made to correspond with those returns.

Expenditures on the Northern Cross Railroad, from the commencement of the work to the 1st December, 1837.

Outfit of engineering party - -	$250 64	
Subsistence of the same - -	383 62	
Pay of engineering party, proportion of agent and Commissioner's pay, and all other expenses -	1,628 54	
		$2,262 80
From 1st December, 1837, to 1st June, 1838.		
Pay and expenses of engineering party -	1,313 00	
Advertising and printing blanks - -	27 63	
Instruments, office rent for engineers, furniture, and stationery for the same - -	252 42	
Proportion of Commissioner's pay - -	75 00	
		1,668 05
From 1st June to 1st August, 1838.		
Expenses accruing previous to the 1st of June—pay and expenses of engineering party -		731 89
		4,662 74

Expenditures on the Peoria and Warsaw Railroad, from the commencement of the work to 1st December, 1837.

For outfit of engineering party, being wagon, 2 horses, tents, blankets, and cooking utensils	$571 58	
Pay of engineering parties	2,231 60	
Subsistence and other expenses of same	644 25	
Proportion of amount paid principal engineer, agent, and Commissioner	558 55	
		$4,005 98
From 1st December, 1837, to 1st March, 1838.		
For 2 levels	230 00	
Rent of office for engineers, fuel and stationery for same	94 87	
Pay and expenses of engineering parties, including subsistence	886 75	
Commissioner's pay	125 00	
		1,326 62
From 1st March to 1st June, 1838.		
Pay and subsistence of engineers	2,338 61	
Instruments	140 00	
Advertising and printing blanks	55 12	
Contractors, for construction	2,127 02	
Commissioner's pay and postage	127 81	
		4,788 56
From 1st June to 1st August, 1838.		
Paid contractors, for construction	9,199 76	
Pay and expenses of engineering	1,640 45	
Printing	9 00	
Pay and expenses of agent	211 02	
Expenses in procuring right of way	96 00	
Right of way	346 67	
Commissioner's pay	155 00	
Principal engineer's salary	1,300 00	
		12,957 90
From 1st August to 1st September, 1838.		
Contractors, for construction	20,636 86	
Pay and expenses of engineering parties	1,429 74	
Expenses for procuring right of way	140 00	
Commissioner's pay	75 00	
		22,281 60
From 1st September to 8th November, 1838.		
Contractors, for construction	12,742 51	
Pay and expenses of engineering	2,285 60	
Office at Warsaw	450 00	
Right of way	816 00	
Attorney's fees	50 00	
Rent of office for engineers, and printing	42 50	
		16,386 61
		61,747 27

Amount brought forward - - -		$61,747 27
From 8th November to 1st December, 1838.		
Contractors, for construction - -	$5,712 00	
Pay and expenses of engineering parties -	903 59	
Commissioner's pay, printing, and postage -	162 97	
		6,778 56
		68,525 83
Amount of drafts on Fund Commissioners in favor of contractors		6,699 74
Amount expended up to 1st December, 1838 - -		75.225 57
Add amount expended on the Northern Cross railroad -		5,662 74
Shows the whole sum expended by me - -		79,888 31

The only building erected by my direction is an engineer's office for the Peoria and Warsaw railroad, at the town of Warsaw. The expense of this building was $450.

The next information required by the resolutions, is of the number and salary of engineers, clerks, and agents employed.

A principal engineer for the northern engineering district, which comprises the fifth, sixth, and seventh, judicial ciruits, has been employed since the commencement of the public works, at a salary of $3,000 per year; a proportion of his services has been rendered in this circuit, and a part of his salary has been paid by me.

There are now employed, on the work under my direction, John W. Ingersoll, superintending engineer on the Peoria and Warsaw railroad, at a salary of $1,500 dollars per annum;

D. E. Bishop, assistant, on the eastern division of the same, at	$3	50	per day.
Oliver Smith, on same	2	00	do.
Darius Brown, on same	1	37½	do.
Wm N. Grover, assistant on the western division of the same	3	75	do.
Abial N. Fry, on same	2	25	do.

In making the maps, plats, and estimates for that part of the road which was located and prepared for contract during the last summer:

John David, assistant engineer, at . .	$3	00	per day.
C. B. Webster . . .	2	50	do.
J. G. Graham . . .	2	00	do.

The engineering parties organized since the commencement of the works were as follows:

First Party.

The first party was organized about the first of June, 1837, and proceeded to make a preliminary survey of the Peoria and Warsaw railroad. It consisted

of John W. Ingersoll, engineer, at a salary of	$1,500	00	per annum.
Wm. N. Grover, leveller . .	3	00	per day.
Edson Harkness, surveyor . .	2	50	do.
Rodman . . .	1	50	do.
1 chainman and 1 teamster, each at . .	1	00	do.
1 chainman and 2 axemen, each . .	20	00	per month.

The survey was completed about the 16th September, when the party was disbanded; the engineer, leveller and surveyor being retained to make the necessary maps, profiles, and estimates. Mr. Ingersoll has been employed ever since as above stated.

SECOND PARTY.

The second party consisted of

William H. Seymour, engineer, at	$1,500 00	per annum.
F. A. Nash, leveller	3 00	per day.
A. R. Parker, surveyor	2 50	do.
2 rodmen, each	2 00	do.
2 chainmen, each	1 00	do.
1 cook	1 12	do.
Teamster and team	2 50	do.

This party commenced a preliminary survey of the Northern Cross railroad between the Illinois and Mississippi rivers, the 28th August, 1837, and completed the same about the 27th of October.

THIRD PARTY.

The next party was organized about the 15th January, 1838, and proceeded to locate and prepare, for contract, the 12 miles of the Peoria and Warsaw railroad extending from Peoria, which was ordered by the Board in December, 1337, to be placed under contract. This service was completed in March. The party was composed of

Edson Harkness, engineer, at	$3 50	per day, including subsistence.
John Davids	2 50	do.
C. B. Webster	2 00	do.
4 hands, each	1 25	do.

FOURTH PARTY.

This party commenced to locate and prepare, for contract, 12 miles extending from Warsaw, of the Peoria and Warsaw railroad, about the 29th January, 1838. Completed the same early in April.

William N. Grover, engineer, at	$3 50	per day, including subsistence.
A. Fry	2 50	do.
3 hands, each	1 50	do.
4 hands, each	1 25	do.

FIFTH PARTY.

The fifth party commenced to locate and prepare, for contract, the Northern Cross railroad, from Quincy to Columbus, about the 22d February, 1838, and completed that service about the 20th April. It was composed of

A. R. Parker, engineer, at	$1,500 00	per annum.
Egbert Dewey	3 50	per day.
G. P. Howell	3 00	do.
W. Raymonds	2 50	do.
2 chainmen and 1 axeman, each	1 50	do.

SIXTH PARTY

The sixth party was organized in July, to make the final location of the Peoria and Warsaw railroad, from the part of the same under contract to Canton, and about the same distance on the West end. It was made up of

John Davids, engineer, at	$3 00	per day.
C. B. Webster	2 00	do.
John G. Graham	1 50	do.
5 hands, each	1 00	do.

By virtue of an order of the Board, made at the last June session, this party was instructed to survey, in addition to the direct line of the road, a route through the town of Farmington. This service was completed early in October, when the party was disbanded.

At the first meeting of the Board, Samuel Hackelton, Esq., a member of the Senate of this State, was appointed general agent for the Board in the northern engineering district, and his compensation fixed at $3 per day. I have paid him, for services rendered in the fifth circuit, the sum of $696.

The amount charged and received by me for services as Commissioner, up to first day of the current month, is $980.

I am not aware of any expenses that have accrued for surveying, examining, or locating, previous to the first day of this month, that remain unpaid.

The following sums have been paid to the persons whose names are set opposite, for the right of way for the Peoria and Warsaw railroad:

John H. Liske	$86 67
George Woodruff	200 00
James C. Armstrong	60 00
Orin Hamblin	1,765 00

On the award of the circuit court:

H. C. Lewis	85 00
A. Moffat	731 00

Awards of justices of the peace are standing unpaid as follows:

In favor of John M. Smith	15 00
In favor of Mark M. Aiken	45 00

The following cases are still pending in the circuit court:

Peter Bartlett, justice's award	$25 00,	appealed by State.
Aloah Moffatt	150 00	do.
Andrew Grey	100 00	do.
James Brown	70 00	do.
James Heaton	200 00	do.
William Mitchell	150 00	do.
Mark M. Aiken	100 00	do.
Henry Wilson	50 00	do.
Edward T. Nowland	25 00	do.
Heirs of Elizabeth Sharp	173 31	
Heirs of Isaac Walters	13 00	
4 other cases, owners unknown, each	20 00	

All of which is respectfully submitted.

JOEL WRIGHT,
Commissioner B. P. W., Fifth Judicial Circuit.

REPORT

OF

THE COMMISSIONER OF THE SIXTH JUDICIAL CIRCUIT.

FEBRUARY 12, 1839.

The undersigned, acting Commissioner of the sixth judicial circuit, has the honor to submit the following statement, in order that the Board may be enabled to answer the call of the honorable the Legislature, for information more in detail than is required in their semi-annual report, to wit: No expense has or will be incurred in procuring the right of way in this circuit. Except in a very small portion, most of the land belongs to the General Government, and the right of way is secured by an act of Congress, if used for that purpose previous to its sale to individuals.

I know of no violation of the forty-seventh section of the internal improvement law., I have paid nothing for clerks or agents. The liabilities for about one-third of the disbursements made by me for engineering and incidental expenses accrued previous to my appointment. The annexed tabular statement, marked A, will exhibit to whom, for what object, and the amount disbursed. Table B will show the number and salary of the several engineers up to the first day of December, 1838, many of whom were discharged previous to and at that date. I have since found that their number could be reduced without detriment to the State, and have given orders accordingly. From the experience I have had in this office, I am led to believe that engineering expenses are more liable than any other to be increased to an unreasonable extent; and that in many instances more strict attention will become necessary in order to produce economy in that branch of expenditures. Table C, annexed, will give my account with the Board of Fund Commissioners.

Respectfully submitted.

JOHN DIXON,
Commissioner of the Sixth Judicial Circuit.

A.

DISBURSEMENTS made by John Dixon, Acting Commissioner of the Board of Public Works of the State of Illinois, up to the 4th day of December, 1838, on the Central Railroad in the Sixth Judicial Circuit, including the expense for surveying the whole, and locating a portion east of the Rocky Ford.

Date.	To whom paid.	Construction.	Camp and other supplies.	Engineers' compensation.	Transportation.	Labor.
1838.						
Aug. 14	A. & D. Dougherty	$1,935 52				
14	Dwinn, Dunn & Raygan	505 41				
14	Hunkins & Carmichael	1,759 96				
14	Power & Passmore	1,560 68				
14	Hunkins & Carmichael	941 83				
14	Orrin Hamlin	1,151 62				
14	Dwinn, Dunn & Raygan	273 30				
14	James Power	894 39				
14	Same	286 75				
14	Beaty & Power	935 46				
14	Same	330 55				
14	Denison & White	1,041 02				
14	W. B. Gilbert	–	–	$166 66		
14	C. A. Barton	–	–	100 00		
14	H. G. Gilbert	–	–	–	–	$52 00
14	A. H. Taggart	–	–	–	–	26 00
14	H. Barlow	–	–	–	–	26 00
14	Wm. Bennett	–	–	–	–	26 00
14	W. B. Gilbert	–	–	–	$20 00	
14	Lorenzo Stacy	–	$3 62			
14	Daniel Shinkle	–	12 34			
14	C. Staller	–	3 00			
14	E. Spratt	–	29 09			
14	John Henry	–	12 50			
14	J. L. Gregory	–	18 93			
14	A. M'Cormick	–	2 34			
14	P. H. Ogilvie	–	–	100 00		
14	W. H. Lyon	–	–	65 00		
21	B. V. Stephenson	–	–	32 50		
21	E. Andrews	–	–	–	–	34 00
21	W. Brown	–	$77 50	–	–	5 00
21	P. Henrick	–	–	–	–	26 00
21	Samuel Jemison	–	3 75			
21	L. Brush	–	3 00			
21	M. Wadleigh	–	–	78 00		
21	H. Wing	–	–	72 00		
21	E. Andrews	–	–	–	–	18 00
21	G. H. Hubble	–	–	–	–	20 00
	F. H. Burroughs	–	–	–	–	26 00
	A. L. Porter	–	–	–	–	2 00
	A. L. Bull	–	–	–	–	2 00
	Wm. Brown	–	–	–	–	10 00
	John Wilson	–	33 13			
	W. P. Burroughs	–	25 13			
	J. Winters	–	–	–	36 00	
	M. F. Truett	–	19 11			
	O. Preston	–	1 75			

STATEMENT A—Continued.

Date.	To whom paid.	Camp and other supplies.	Engineers' compensation.	Transportation.	Instruments, stationery, &c.	Labor.
1838.						
Aug. 21	C. Bruikner	$4 75				
	C. Kenkle	3 50				
	G. W. Harrison	2 00				
	J. B. Barr	2 00				
	N. Wade	3 00				
	John Dowling	1 25				
	J. D. Winters	2 00				
	Joseph Pearsons	–	–	$100 00		
	M. F. Truett	–	–	–	$13 37	
	Hooper, Peck & Scales	–	–	–	17 25	
	A. Blanc, for office rent	–	–	–	100 00	
	P. H. Ogilvie	–	$100 00			
	W. H. Lyon	–	67 50			
	P. Henrick	–	–	–	–	$27 00
	James Beaty	4 75				
	Benson Hunt	5 00	–	–	–	1 00
	N. Crane	52 25	–	3 00		
	W. B. Gilbert	–	166 66			
	C. A. Burton	–	100 00			
	H. G. Gilbert	–	–	–	–	54 00
	A. H. Taggart	–	–	–	–	27 00
	H. Barlow	–	–	–	–	27 00
	W. Bennet	–	–	–	–	27 00
	J. D. Carpenter	35 00	–	5 00		
	James Ryan	1 12½				
	D. Shinkle	2 61				
	A. B. Mason	6 77	–	1 00		
	T. R. Rice	1 25				
	John Henry	7 37				
	W. Bennet	–	–	2 00		
	James Pratt	4 00				
	L. Stacy	2 25				
	Daniel Gregory	9 96				
	A. Hathaway	9 63				
	W. B. Gilbert	11 25	–	20 00		
Sept. 7	M. Wadleigh	–	81 00			
	G. W. Clarke	–	33 00			
	H. Wing	–	–	–	–	54 00
	E. Andrews	–	–	–	–	54 00
	G. H. Hubble	–	–	–	–	54 00
	F. H. Burroughs	–	–	–	–	27 00
	A. L. Porter	–	–	–	–	27 00
	A. L. Bull	–	–	–	–	27 00
	Smith, Journey & Co.	37½				
	John Anking	2 65				
	Samuel Preston	1 44				
	W. B. Gilbert	12 00	–	–	8 50	
	J. D. Winters	–	–	12 00		
	F. R. Dutcher	21 00				
	N. Shoemaker	4 00				
	B. Hammond	3 91				
	V. A. Bogue	8 50				
	Daniel Richeson	1 55				
	J. B. Sims	3 22				

STATEMENT A—Continued.

Date.	To whom paid.	Construction.	Camp and other supplies.	Engineers' compensation.	Instruments, stationery, &c.	Labor and transportation.
1838.						
Sept. 7	J. J. Caswell	–	$2 50			
Oct. 1	F. A. Nash	–	–	–	–	$9 00
1	J. L. Hooker	–	–	–	–	62 50
1	J. H. Hatch	–	–	–	–	50 00
1	John Robson	–	–	–	–	25 00
1	Edward Rose	–	–	–	–	25 00
1	James M'Interfer	–	–	–	–	87 50
1	W. H. Seymour	–	62 99			
1	Henry Nelson	–	–	–	–	30 00
Sept. 7	F. A. Nash	–	–	–	–	67 50
7	J. L. Hooker	–	–	–	–	22 00
7	Same	–	–	–	–	16 00
7	John Robson	–	–	–	–	27 00
7	G. H. Hatch	–	–	–	–	11 00
7	E. Rose	–	–	–	–	17 00
7	Jas. M'Interfer	–	–	–	–	50 00
7	H. Nelson	–	–	–	–	16 00
Oct. 1	W. B. Gilbert	–	–	$166 66		
1	C. A. Burton	–	–	100 00		
1	H. G. Gilbert	–	–	–	–	50 00
1	A. H. Taggart	–	–	–	–	25 00
1	H. Barlow	–	–	–	–	25 00
1	John Lent	–	1 50			
1	S. D. Carpenter	–	54 00			
1	W. B. Gilbert	–	–	–	–	20 00
1	W. H. Seymour	-	117 23			
1	P. H. Ogilvie	–	–	100 00		
1	W. H. Lyon	–	–	62 50		
1	Wm Schlatter	–	–	50 00		
1	P. Henrick	–	–	–	–	25 00
1	W. Crane	–	66 00			
1	O. Hamlin	$690 20				
1	Power & Passmore	948 69				
1	Beaty & Power	245 17				
1	Denison & White	345 65				
1	Power & Passmore	645 58				
1	O. Hamlin	316 03				
1	Beaty & Power	138 92				
1	Denison & White	417 80				
1	Same	402 11				
1	Hunkins & Carmichael	2,219 31				
1	Dwinn, Dunn & Raygan	1,213 83				
1	James Power	66 03				
23	Carson, Dean & Co.	–	672 45	–	$18 31	
23	H. H. Houghton, for printing	–	–	–	31 00	
23	W. H. Seymour,	–	–	166 66		
Nov. 1	Beaty & Power	293 13				
1	Hunkins & Carmichael	184 51				
1	O. Hamlin	602 70				
1	Same	1,039 33				
1	Denison & White	70 25				
1	Same	180 75				
1	Hunkins & Carmichael	596 56				
1	Dwinn, Dunn & Raygan	53 73				
1	A. G. S. Wight	5,300 18				

STATEMENT A—Continued.

Date.	To whom paid.	Camp and other supplies.	Engineers' compensation.	Transportation.	Instruments, stationery, &c.	Labor.
1838.						
Nov. 1	F. A. Nash -	-	$37 50			
	J. L. Hooker -	-	-	-	-	$30 00
	John Robson -	-	-	-	-	15 00
	S. H. Hatch -	-	-	-	-	15 00
	Edward Rose -	-	-	-	-	15 00
	James M'Interfer -	-	-	$37 50		
	Henry Nelson -	-	-	-	-	17 00
	W. H. Seymour -	$42 05	41 66			
	G. W. Clarke -	-	81 00			
	H. Wing -	-	54 00			
	E. Andrews -	-	-	-	-	54 00
	G. H. Hubble -	-	-	-	-	54 00
	F. H. Burroughs -	-	-	-	-	27 00
	J. L. Porter -	-	-	-	-	27 00
	A. L. Bull -	-	-	-	-	27 00
	S. Preston -	-	-	-	-	27 00
	Smith, Journey & Co. -	22 93	-	-	$1 80	
	S. Gilbraith -	5 18	-	10 00		
	T. M'Cabe -	7 56				
	W. P. Burroughs, fuel -	7 67	-	-	2 00	
	J. H. Morgan -	3 37½				
	N. Shoemaker -	6 81½				
	O. W. Kellogg -	11 87½				
	D. Grant -	6 24				
	M. F. Truett -	8 73				
	W. Brown -	-	-	4 50		
	S. M. Bowman & Co. -	27 56				
	B. Stuart -	4 13				
	O. R. Anking -	8 50	-	1 25		
	J. Gee -	5 34	-	5 00		
	A. R. Rooble -	4 25				
	S. Fellows -	4 68	-	-	50	
	P. Shoemaker -	6 18	-	-	-	3 32
	S. M. Bowman & Co. -	2 13				
	A. W. Hughs -	1 63				
	W. B. Gilbert -	-	166 66	20 00		
	A. H. Taggart -	-	-	-	-	27 00
	H. Barlow -	-	-	-	-	27 00
	H. G. Gilbert -	-	-	-	-	54 00
	S. D. Carpenter -	33 00				
	H. G. Gilbert, fuel -	-	-	-	3 35	
	D. Gregory -	59 00				
	G. W. Clarke -	-	75 50			
	H. Wing -	-	50 00			
	E. Andrews -	-	-	-	-	50 00
	G. H. Hubble -	-	-	-	-	50 00
	F. H. Burroughs -	-	-	-	-	25 00
	W. Porter -	-	-	-	-	25 00
	A. L. Bull -	-	-	-	-	25 00
	M. Smith -	-	-	-	-	20 00
	Seth Preston -	11 95	-	-	-	6 00
	Samuel Preston -	2 50				
	V. A. Bogue -	-	-	1 50		

STATEMENT A—Continued.

Date.	To whom paid.	Construction.	Camp and other supplies.	Engineers' compensation.	Instruments, stationery, &c.	Transportation and labor.
1838.						
Nov. 1	H. Downing	-	$2 25			
1	F. R. Dutcher	-	6 25			
1	A. Downing	-	5 00	-	-	$2 50
1	M. Shoemaker	-	1 25			
1	G. W. Clark	-	5 54	-	-	22 00
1	Bowen & Eason	-	49 70			
1	P. H. Ogilvie	-	-	$100 00		
1	W. H. Lyon	-	-	67 50		
1	B. V. Stephenson	-	-	-	-	67 50
1	Wm. Schlatter	-	-	12 00		
1	P. Henrick	-	-	-	-	27 00
1	A. Boyd	-	-	-	-	9 00
1	J. D. Crois	-	-	-	-	6 00
1	Asher Edgerton	-	89 00			
1	Stephens & Brown	-	-	-	$11 00	
26	Denison & White	-	$69 20			
26	Beaty & Power	-	360 27			
26	Same	-	152 65			
26	Dwinn, Dunn & Co.	-	116 00			
26	Hunkins & Carmichael	-	728 66			
26	Same	-	137 68			
26	Orrin Hamlin	-	517 70			
26	Cady & Wilson	-	286 88			
26	Denison & White	-	338 83			
26	Power & Beaty	-	187 81			
26	O. Hamlin	-	199 51			
Dec. 1	P. H. Ogilvie	-	-	100 00		
1	W. H. Lyon	-	-	65 00		
1	B. V. Stepehnson	-	-	57 50		
1	A. Boyd	-	-	-	-	17 00
1	John Emmonds	-	-	-	-	13 00
1	Salmon Peckam	-	-	-	-	10 00
1	Moses L. Mahaffer	-	-	-	-	8 00
1	P. Henrick	-	-	-	-	3 00
1	John M'Gregor	-	-	-	-	3 00
1	A. Edgerton	-	12 00			
1	Leonard Goss	-	6 09			
1	John Lowell	-	16 75			
1	F. Falts	-	4 50			
1	H. O. Hull	-	2 75			
1	A. Pierce	-	31 37			
1	B. Dennison	-	14 00			
1	G. W. Clarke	-	-	78 00		
1	H. Wing	-	-	52 00		
1	E. Andrews	-	-	-	-	34 00
1	G. H. Hubble	-	-	-	-	52 00
1	F. H. Burroughs	-	-	-	-	26 00
1	A L. Porter	-	-	-	-	19 00
1	A. L. Bull	-	-	-	-	26 00
1	Seth Preston	-	-	-	-	4 00
1	John Wilson	-	52 38			
1	F. R. Dutcher, transportation	-	131 31	-	-	50
1	E. Andrews	-	-	-	7 25	

STATEMENT A—Continued.

Date.	To whom paid.	Miscellaneous.	Camp and other supplies.	Engineers' compensation.	Instruments, stationery, &c.	Transportation & labor.
1838.						
Dec. 1	M. Wadleigh -	-	-	$147 00	$8 12	
1	W. Rathbone -	-	$5 06			
1	W Clogher -	-	-	147 00		
1	W. B. Gilbert -	-	-	166 66		
1	C. A. Burton -	-	35 00	100 00		
1	H. G. Gilbert -	-	-	-	-	$52 00
1	A. H. Taggart -	-	-	-	-	26 00
1	H. Barlow -	-	-	-	-	13 00
1	S. D. Carpenter -	-	51 00			
1	H. G Gilbert, fuel -	-	-	-	4 50	
1	N. Hinckley -	-	33 71			
1	W. B. Gilbert -	-	-	-	20 00	
1	John Dixon, salary -	$485 00				

A—Continued.

DISBURSEMENTS made by John Dixon, Acting Commissioner for the Sixth Judicial Circuit, up to the 4th day of December, 1838, for the Rock River Improvement.

Date.	To whom paid.	Construction.	Miscellaneous.	Camp and other supplies.	Engineers' compensation.	Transportation.	Instruments and stationery.	Labor.
1838.								
Aug. 14	A. Blanc	–	–	–	$166 66	$26 50	$194 00	
14	O. Blanc	–	–	–	104 00			
14	E. Gilbert	–	–	–	–	–	–	$52
14	B L. Turnbull	–	–	–	–	–	3 00	26
14	J. C. Dinnies	–	–	–	–	–	8 67	
14	Crowell & Wilson	–	–	$18 00				
14	S. Johnston	–	–	27 63				
14	O. Blanc	–	–	–	–	65 50		
14	J. P. Dixon	–	–	–	–	18 00		
14	J. Merrill	–	–	4 75				
14	A. Blanc	–	–	–	166 66			
14	O. Blanc	–	–	–	104 00			
14	E. Gilbert	–	–	–	–	–	–	52
14	F. Shiot	–	–	–	–	–	–	26
14	O. Blanc	–	–	–	–	13 50		
14	Daniel Hawes	–	–	49 00				
14	G. Vandruff	–	–	–	–	13 50		
14	R. Wells	–	–	34 00				
14	Hooper, Peck & Scales	–	–	–	–	–	6 00	
Sept. 1	A. Blanc	–	–	–	166 66			
1	O. Blanc	–	–	–	108 00	10 00		
1	E. D. Gilbert	–	–	–	–	–	–	54
1	F. Shiot	–	–	–	–	–	–	27
1	Crowell & Wilson	–	–	–	–	7 50		
1	S. Gilbraith	–	–	–	–	16 00		
1	Daniel Hawes	–	–	77 00				
1	J. Castle, skiff	–	$18 00					
1	O. Blanc	–	–	–	166 66			
1	E. D. Gilbert	–	–	–	–	–	–	50
1	F. Shiot	–	–	–	–	–	–	25
1	L. Gregory, office rent	–	22 95					
1	Daniel Hawes	–	–	51 48				
Aug. 4	Sterling, Mix & Co.	$945 54						
4	Dutcher, Keyhoe & Co.	485 00						
Sept. 1	Sterling, Mix & Co.	2,424 71						
Nov. 1	O. Blanc	–	–	–	166 66			
1	E. Gilbert	–	–	–	–	–	–	54
1	F. Shiot	–	–	–	–	–	–	27
1	D. Hawes	–	–	53 00				
1	D. R. Wilcox	–	–	–	–	–	2 50	
1	W. R. Newton	–	–	–	–	–	8 00	
1	A Muster	–	–	–	–	–	3 00	
Dec. 1	O. Blanc	–	–	–	166 66	27 50		
1	E. Gilbert	–	–	–	–	–	–	52
1	Wythe, Collard & Co.	–	–	–	–	–	–	2
1	D. Hawes	–	–	34 00				
Oct. 1	Sterling, Mix & Co.	662 49						
Nov. 7	Same	1,335 82						

B.

AN EXHIBIT of the number of engineers employed, their rates of compensation, amount paid to each in full for services rendered on the Central Railroad and Rock River Improvement, in the Sixth Judicial Circuit, by John Dixon, Acting Commissioner, up to December 1, 1838.

Names of engineers.	When employed.	Salary per annum.	Pay per day.	Where employed.		Remarks.
				Rock river.	Central railroad.	
W. B. Gilbert -	From July 1, 1838, to Dec. 1, 1838 -	$2,000 00	-	-	$833 33	
C. A. Burton -	" July 1, 1838, to Nov. 1, 1838 -	1,200 00	-	-	400 00	Left service November 1, 1838.
P. G. Ogilvie -	" July 1, 1838, to Dec. 1, 1838 -	1,200 00	-	-	500 00	
Wm. H. Lyon -	" July 1, 1838, to Dec. 1, 1838 -		$2 50	-	327 50	Left service December 1, 1838.
B. V. Stephenson -	" July 1, 1838, to Aug. 12, 1838 -	-	2 50	-	90 00	Left service August 12, 1838
Milton Wadleigh -	" July 1, 1838, to Dec. 1, 1838 -	-	3 00	-	306 00	Left service November 1, 1838.
Henry Wing -	" July 1, 1838, to Oct. 7, 1838 -	-	2 50	-	228 00	Left service November 1, 1838.
G. W. Clarke -	" Aug. 24, 1838, to Dec. 1, 1838 -	-	3 00	-	192 00	
Wm. Schlatter -	" Aug. 24, 1838, to Sept. 20, 1838 -	-	3 00	-	62 00	Left service September 20, 1838.
W. Clogher -	49 days - - -	-	3 00	-	147 00	Employed in office as draftsman.
Amede Blanc -	" June 1 to Sept. 1 - -	2,000 00	-	$500 00	-	Left service September 1, 1838.
Octave Blanc -	" June 1 to Sept. 1 - -	1,200 00	-	316 00		
Same -	" Sept. 1 to Dec. 1 - -	2,000 00	-	500 00		
W. H. Seymour -	1¼ month - - -	2,000 00	-	-	208 32	
F. A. Nash -	9¼ days - - -	-	4 00	-	37 50	

C.

ABSTRACT of vouchers returned to the Fund Commissioners by John Dixon, Commissioner of the Board of Public Works for the Sixth Judicial Circuit.

Date.		To whom and for what paid.	No. of vouchers.	Amount.
		Central Railroad.		
1838.				
Aug.	14	J. & D. Dougherty, on estimate	1	$1,935 52
	14	Devine & Co., on estimate	2	505 41
	14	D. Hunkins & Carmichael, on estimate	3	1,759 96
	14	J. Brown & Passmore, on estimate	4	1,560 68
	14	Hunkins & Carmichel, on estimate	5	941 83
	14	Orrin Hamlin, on estimate	6	1,151 62
	14	M. Devin & Co., on estimate	7	273 30
	14	James Power, on estimate	8	894 52
	14	Same, on estimate	9	286 75
	14	J. Beaty & J. Power, on estimate	10	935 46
	14	Same on estimate	11	330 55
	14	B. Denison & J. White, on estimate	12	1,041 02
	21	Pay Roll of July and vouchers therewith	13	351 63
	14	Do. W. G. Gilbert, do.	14	502 47
	21	P. H. Ogilvie, pay roll and vouchers	15	346 83
	21	Joseph Pearsons, for oxen and chain	18	100 00
Sept.	1	C. A. Burton, pay roll for August	16	520 87½
	1	P. H. Ogilve, pay roll for August	17	260 65
	7	Power & Passmore, on estimate	19	948 60
	7	O. Hamlin, on estimate	20	690 20
	7	Beaty & Powers, by O. Hamlin, estimate	21	245 17
	7	Denison & White, on estimate	22	345 65
	7	H. H. Houghton, for printing	23	31 00
Aug.	22	A. Blanc, for office rent	24	100 00
	21	Hooper, Peck & Scales, for stationery	25	17 25
	21	M. F. Truett, for stationery	26	13 37
				16,090 18½
		Rock River Improvement.		
	14	A. Blanc, pay roll for June	27	$484 21
	14	Same, pay roll for July	28	678 16
Sept.	1	Same, pay roll for August	29	484 41
	1	Sterling, Mix & Co., on estimate	30	2,424 71
Aug.	22	Hooper, Peck & Scales, one journal	31	6 00
	25	Keyhoe, Laverty & Dutcher, on contract	32	485 00
				4,562 49
		Central Railroad.		
Oct.	1	James Power, on estimate	33	$66 03
	1	Hunkins & Carmichael, on estimate	34	2,219 31
	1	Power & Passmore, on estimate	35	645 58
	1	Orrin Hamlin, on estimate	36	316 03
	1	Dunn & Raygan, on estimate	37	1,213 83
Nov.	1	Orrin Hamlin, on estimate	38	602 70
Sept.	7	Beaty & Power, on estimate	39	138 92
Oct.	1	Beaty, Denison & White, on estimate	40	417 80
	1	Same, on estimate	41	402 11
Nov.	1	Same, on estimate	42	180 75
	1	Hunkins & Carmichael, on estimate	43	184 51
	1	Denison & White, on estimate	44	70 25

STATEMENT C.—Continued.

Date.	To whom and for what paid.	No. of vouchers.	Amount.
1838.	*Central Railroad*—Continued.		
Nov. 1	Orrin Hamlin, on estimate	45	$1,039 33
1	Hunkins & White, on estimate	46	596 58
1	Beaty & Power, on estimate	47	293 13
Oct. 23	Carson, Dean & Co., supplies	48	690 45
Sept. 1	M. Wadleigh and party, pay roll	49	455 64
Oct. 1	G. W. Clarke and party, pay roll	50	438 31
1	Same, pay roll	51	522 14½
1	W. H. Seymour, pay roll for October	52	209 05
1	Same, supplies	53	226 50
1	Same, pay roll for August and September	54	280 00
1	Same, pay roll	55	166 66
1	Same, provisions	56	62 99
1	Same, sundry payments	57	117 23
15	Same, services as engineer	58	41 66
26	Wm. Brown, services	59	10 00
1	P. H. Ogilvie and party, pay roll for September	60	303 50
1	C. A. Burton and party, pay roll for September	61	442 16
1	Same, pay roll for October	62	389 91
1	P. H. Ogilvie and party, pay roll for October	63	378 00
			13,121 06½
	Rock River Improvement.		
Aug. 1	Sterling, Mix & Co., on estimate	64	$945 54
Oct. 1	Same, on estimate	65	662 49
1	O. Blanc & party, pay roll for September	66	332 59
1	Same, pay roll for October	67	314 16
			2,254 78
	Central Railroad.		
Nov. 26	A. G. S. Wight, on estimate	68	$5,300 18
26	T. Dunn & Co., on estimate	69	116 00
26	Hunkins & Carmichael, on estimate	70	728 66
26	Same, on estimate	71	137 68
26	O. Hamlin, on estimate	72	517 70
26	Dunn, Raygan & Co., estimate	73	53 73
26	Cady & Wilson, on estimate	74	286 88
26	Beaty & Power, on estimate	75	152 65
26	Same, on estimate	76	360 27
26	Same, on estimate	77	187 81
26	O. Hamlin, on estimate	78	199 51
26	Denison & White, on estimate	79	338 83
26	Same, on estimate	80	69 20
26	Stephens & Brown, instruments	81	11 00
Dec. 1	M. Wadleigh, for services in office	82	147 00
1	William Clogher, for services in the office	83	147 00
1	P. H. Ogilvie and party, pay roll	84	373 12
1	G. W. Clarke and party, pay roll	85	495 62
1	C. A. Burton and party	86	501 81
1	Compensation as Commissioner	87	485 00
			10,609 71

REPORT

OF THE

COMMISSIONER SEVENTH JUDICIAL CIRCUIT.

ABSTRACTS of vouchers returned by E. Peck, Commissioner of the Board of Public Works for the Seventh Judicial Circuit of the State of Illinois.

Date.	To whom and for what paid.	Vouchers.	Amount.
	No. 1.—*Abstract of vouchers returned December* 6, 1837.		
1837.			
March	Six days' services, and 30 days in April -	-	$180 00
April	Postage on letter from President - -	-	18¾
"	Postage on do. from H. Woodworth, assistant engineer - - -	-	75
May 9	One day with engineer - -	-	5 00
20	Cash paid for printing pay rolls - -	1	16 00
22	Postage on letter, W. E. Starr - -	-	25
22	Postage, do. M. K. Alexander -	-	18¾
27	Postage, do. A. R. Parker - -	-	12½
17	Cash paid J. Seymour, engineer - -	2	500 00
29	Cash paid same - -	3	400 00
29	Six days' time - - -	-	30 00
June	Fourteen days attending meeting of the Board -	-	70 00
23	Two days' time - -	-	10 00
23	Postage paid - - -	-	56¼
24	Cash paid S. Hackleton, for camp equipage, provisions, &c. - - -	4	906 13
26	Postage on letters and papers - -	-	87½
26	Two days' time - - -	-	10 00
July 15	Postage on letter from E. Willard - -	-	37½
22	Cash on pay roll for June and July -	5	978 62½
24	Eight days' time in July - -	-	40 00
August 3	Postage on letter from M. M'Connel -	-	18¾
23	Salary to H. P. Woodworth, engineer -	6	300 00
23	Pay roll for August, Woodworth's party -	7	397 75
October	Eleven days' time - - -	-	55 00
November	S. F. Gale, for stationery and pay roll and engineers' expenses - - -	8 & 9	367 80
17	Paid J. Seymour, principal engineer, and for wood	10 & 11	654 50
17	Paid for instruments, 12 & 13, King, Walker & Co.	14	54 08
17	Paid H. P. Woodworth, see vouchers 15 & 16, for salary, &c. - - -	-	716 55
17	Paid A. Calhoun, for desk and table -	17	14 00
17	Fifteen days' time - - -	-	75 00
17	S. Hackleton, for services and expenses as agent -	19 & 20	105 00
17	Cash paid R. Freeman, for services with engineering party. - - -	21	43 00
			$5,931 94
	No. 2.—*Abstract of vouchers returned June* 7, 1838.		
	To cash paid—		
December	Pay Roll, for November and December -	1	$124 00
30	H. P. Woodworth, assistant engineer, for services	2	209 68
1838.			
January	Pay Roll, for January, 1838 - -	3	81 00
"	W. H. Seymour, for instruments for office -	4	3 75
20	H. P. Woodworth, do. - -	5	65 00
29	Same, levelling instruments -	6	120 00
31	Same, services as engineer -	7	125 00
1837.			
Nov. 20	Dewey & Jones, for chairs for engineers -	12	7 50
1838.			
March	Pay Roll, for the month of March - -	15	135 00
"	Pay Roll, for the month of February -	13	120 00
May	King, Walker & Co., for instruments, &c. -	17	56 38

ABSTRACTS—Continued.

Date.	To whom and for what paid.	Vouchers.	Amount.
	No. 2—*Continued.*		
1838.			
	To cash paid—		
1	A. W. Fullerton, for rent of office -	16	$48 00
April 23	Albany Argus, for advertising to contractors -	18	11 00
May 18	John Wentworth, for printing blanks -	19	94 50
June 4	J. S. M'Cracken, for printing - -	20	10 50
4	Pay Roll, for November and December, 1837 -	21	260 00
4	Pay Roll, for January, 1838 - -	22	135 00
4	Twenty-five days' services in December, 1837 -	-	125 00
4	Twenty do. January, 1838 -	-	120 00
4	Eighteen do. February, 1838 -	-	90 00
4	Twenty-two do. May, 1838 -	-	110 00
January	A. R. Parker and others, expenses travelling -	9	92 00
"	S. F. Gale, for stationery - -	8	39 52
Feb. 19	Sydney Abell, P. M. for bill of postage -	11	31 37
19	William Thompson, for wood - -	10	4 50
29	H. P. Woodworth, for services as engineer -	14	300 00
			$2,498 70
	No. 3.—*Abstract of vouchers returned Sept.* 27, 1838.		
	To cash paid—		
April 18	L. Lewis, for board of engineering party -	1	$130 88
May 7	D. S. Dewey, for instrumen's - -	2	5 00
25	F. Mills, for services of self and team -	3	31 50
30	W. H. Seymour, for provisions, furniture, &c. -	4 & 5	121 72
June 7	George Holton, for stationery - -	6	6 75
1	Commissioner, for 9 days' services - -	-	45 00
21	B. Coville, for services - -	7 & 8	44 87
25	H. P. Woodworth, for expense, board, &c. -	9	86 55
28	T. B. Ransom, for provisions and sundry expenses	10	197 58
13	F. Mills, for services of self and team -	11	42 00
19	Throy & M'Cally, for drawing table and bench -	12	7 00
30	Commissioner, 30 days' time in June -	-	150 00
April	Pay Roll in April, W. H. Seymour's party -	13	248 00
May	Pay Roll in May, do. -	14	301 00
June	Pay Roll in June, do. -	15	290 00
May&June	Pay Roll in June, T. B Ransom's party -	16	591 00
June 25	H. P. Woodworth, for salary, board, &c. -	17	1,227 00
July 31	Commissioner, 31 days' time in July -	-	155 00
Aug. 16	Manville & Co., contractors, per estimate -	18	249 55
25	Loyd Stearns, for 1 sorrel mare -	19	81 50
1	Harkness & Bigelow, contractors, per estimate -	20	513 76
1	W. H. Seymour, services as assistant engineer -	21	83 33
July	Pay Roll for July, Ransom and Seymour's party -	22 & 23	533 00
Aug. 1	W. H. Seymour, expenses of party, June and July	24 & 25	173 06
30	A. Bells, for provisions, stationery, &c. -	26 to 36	42 66
16	Huntington & Raymond, bill for provisions -	37	5 43
16	Mrs. Mathena, for eggs - -	38	1 15
8	Wm. Kelly, for flower, butter, eggs, &c. -	39	13 82
May 28	E Hendricks, for beef, butter and eggs -	40	4 47
Aug. 2	G. W. Gibson, for eggs, meat, vegetables, &c. -	41	38 22
2	Lynar & Burnham, for pork, sugar and mackerel -	42,43,44	12 77
4	Seydell & Roberson, for beef, mutton, veal, &c. -	45	11 62
14	H. Wood, per his bills - -	46	33 24
14	Joseph Roberson, for provisions - -	47	8 23
8	John Griffin, for ferriage - -	48	20 00
July 3	Z. Lewis, for bacon - -	49	1 88
27	N. B. Manville, for provisions - -	50	7 57
27	F. Mills, for services - -	51	1 50

ABSTRACTS—Continued.

Date.	To whom and for what paid.	Vouchers.	Amount.
	No. 3—*Continued.*		
1838.			
	To cash paid—		
July 27	Douglass & Wells, for milk - -	52	$6 00
Aug. 7	C. S. Woodworth, for provisions, &c. -	53	11 00
7	Guy Wells, for board, &c. - -	54	5 00
Sept. 1	S. F. Gale, for stationery - -	55	41 76
1	Z. Lewis, for horse keeping, boarding, &c. -	56	30 00
July 2	T. B. Ransom, on account of salary -	57	200 00
1	W. H. Seymour, for salary and expenses -	58	260 00
27	G. W. Webber, advertising notice to contractors -	59	10 00
26	Foster & Robb, for Raven's duck and making tents	60	105 05
Sept. 1	Harkness, Bigelow & Co. contractors, per estimate	61	736 34
Aug. 16	E. V. Hungerford, horse-hire - -	62	9 00
June 7	William Walters, for printing - -	63	10 50
7	William Hessin, for do. - -	64	10 50
Sept. 7	Cronkhite & Doolittle, contractors, per estimate	65	130 48
Aug. 31	Commissioner, for 31 days' service in August -	-	155 00
Sept. 8	Commissioner, for 8 days' time in September -	-	40 00
1	Perry, Wilson & Co., contractors, per estimate in August - - -	66	900 56
1	Kennedy & Bracken, contractors, per estimate -	68	812 23
8	T. B. Ransom, on account of salary -	69	650 00
			$9,641 03
	No. 4.—*Abstract of vouchers returned December* 4, 1838.		
	To cash paid—		
Oct. 1	Harkness & Bigelow, contractors, per estimate -	1	952 39
1	Perry, Wilson & Co., do. " -	2	610 75
1	Cronkhite & Doolittle, do. " -	3	722 58
Sept. 1	Kennedy & Bracken, do. " -	4 & 5	1,130 83
1	Pay Roll of G. W. Gilson's party, for September -	6	304 50
1	Pay Roll of H. K. Curtis's party, for August & Sept'r	7 & 8	208 00
9	T. B. Ransom, on account of salary as engineer -	9	140 00
Oct. 29	Thos. Bishop, for attendance on sick horse -	10	9 00
29	Commissioner, for 22 days' time in September -	-	110 00
May 21	A. Calhoun, for making box, &c. -	11	1 00
Oct. 30	M. O. Conner, sundry jobs about the office -	12	14 25
April	Pay Roll of T. B. Ransom's party, for April -	13	146 00
Sept. 20	John Calhoun, for 1 saddle and bridle -	14	12 00
Nov. 13	Goodsell & Campbell, for timothy seed -	15	23 25
October	Pay Roll of W. H. Seymour's party -	16	140 00
August	Pay Roll of G. W. Gilson's party -	17	165 50
"	Pay Roll of C. Woodworth's party -	18	188 00
Nov. 1	Cronkhite & Doolittle, contractors, per estimate -	19	967 08
1	Harkness & Bigelow, do. " -	20	1,093 32
1	Perry, Wilson & Co. do. " -	21	1,704 33
1	Commissioner, for 31 days in October -	-	155 00
Sept. 1	Pay Roll of C. Woodworth, to 1st September -	22	108 50
Oct. 19	W. H. Seymour, for provisions and blacksmith work	23	27 33
Sept. 1	T. B. Ransom, for provisions, &c. -	24	48 45
3	H. K. Curtis, for services as engineer -	25	125 00
Nov. 1	T. B. Ransom, for instruments -	26	33 00
Oct. 22	S. H. Davis, printing and binding -	27	11 50
Nov. 1	W. H. Seymour, for services, provisions, wood, &c.	28 & 29	64 90
Sept. 20	H. Wood, for provisions, nails, &c. -	30	31 70
Aug. 22	James Wilson, for blankets and camp equipage -	31	85 78
Sept. 22	H. K. Curtis, for sundries - -	32	2 40
Aug. 23	J. P. Thompson, for pot metal - -	33	5 35
Sept. 1	John & N. J. Abram, for camp furniture, &c. -	34	12 00

ABSTRACTS—Continued.

Date.	To whom and for what paid.	Vouchers.	Amount.
	No. 4—*Continued.*		
1838.			
	To cash paid—		
November	Commissioner, 30 days in November -	-	$150 00
Sept. 20	Lyman & Bunker, for lumber - -	35	12 15
Nov. 17	S. F. Gale, for stationery - -	36	5 07
17	H. B. Clark, for stove pipe, &c. - -	37	4 81
17	One day's time omitted in March - -	-	5 00
Sept. 1	Perry, Wilson & Co. contractors, per estimate -	38	900 56
1	J. H. Walker, for expenses to and from Vandalia	39	96 71
Nov. 1	H. Johnson, for 1 skiff, mast and sail -	40	15 00
July 10	S. P. Sherwood, for 2 levelling instruments -	41	259 00
Dec. 1	Perry, Wilson & Co. contractors, per estimate -	42	2,144 59
1	Harkness & Bigelow, do. " -	43	868 51
1	Kennady & Bracken, do. " -	44	458 12
1	Cronkhite & Doolittle, do. " -	45	1,270 19
1	Pay Roll of C. S. Woodworth, for October -	46	304 35
1	Pay Roll of same, for September -	47	335 32
1	Pay Roll of same, for November -	48	203 89
1	Pay Roll of W. H. Seymour and party, for do. -	49	141 37
1	Pay Roll of same, for do. -	50	169 00
1	T. B. Ransom, for stationery, &c. -	51	47 87
1	W. H. Seymour, for board, repairs to boat, &c. -	52	86 02
1	T. B. Ransom, for expenses horse-keeping, &c. -	53	74 60
1	W. H. Seyour, for services - -	54	100 00
1	T. B. Ransom, for services as senior ass't engineer	55	1,173 62
1	P. Balingall, for services in procuring right of way	56	40 00
1	Moses Hoyt, for two pine tables - -	57	14 00
1	C. Lyon, for services as chainman -	58	36 57
1	H. P. Woodworth, for services and expenses as engineer - - -	59	304 62
1	H. P. Woodworth, for services as chief engineer -	60	1,200 00
			$19,765 66

RECAPITULATION.

No. 1.—Amount returned	December 6, 1837 - - -		$5,931 94
2.—Amount "	June 7, 1838 - - -		2,498 70
3.—Amount "	Septem'r 27, 1838 - - -		9,641 03
4.—Amount "	December 4, 1838 - - -		19,765 66
Total amount	- - - - -		$37,837 33

REPORT

OF

THE JOINT SELECT COMMITTEE OF INVESTIGATION

APPOINTED

TO EXAMINE THE OFFICES

OF THE

FUND COMMISSIONERS AND BOARD OF PUBLIC WORKS

OF

THE STATE OF ILLINOIS.

VANDALIA:
WILLIAM WALTERS, Public Printer.
1839.

IN SENATE, FEBRUARY 20, 1839.

Laid on the table.

Mr. GATEWOOD, from the Joint Select Committee of Investigation, made the following

REPORT:

The Joint Select Committee of Investigation appointed by joint resolution of both Houses of the General Assembly, to examine the office of Fund Commissioners, the office of Commissioners of the Board of Public Works, and to examine and inquire into the conduct and management of the various Commissioners, and their officers under them, have been for some time engaged therein, and ask leave respectfully to report:

That, under and by virtue of the resolution above referred to, which is found upon the Journals of the committee, the committee met and organized on the 3d day of January, 1839, and have continued in session until the 20th day of February, 1839, and, during all their sessions, have had under consideration the subjects of inquiry assigned them in the resolution raising them.

The accumulation of testimony, and the subjects themselves, are so voluminous, that it would be impossible for this committee to report minutely upon all the facts stated and information elicited.

The examination of the office of Fund Commissioners has been rather slight in some respects, and consists principally in obtaining an abstract of all the vouchers, on file in that office, upon which money has been paid. The examination of this office, its books, vouchers, and mode of doing business, almost entirely superseded an investigation into that of the Commissioners of Public Works, and indeed that has been rendered unnecessary by this committee, in consequence of the voluminous replies by that Board to the calls made by the two Houses of the Legislature.

The accounts as kept by this Board, as far as we have been able to judge, have been properly kept, under the law. The only thing that it is necessary to correct, in the opinion of this committee, would be, to provide that no credit should be allowed to any Commissioner of Public Works on his accounts, unless the voucher specifies the particular work to which the money has been paid. To understand this properly, it is necessary to be observed that the Commissioners of Public Works are, under the law, authorized to have in their hands, respectively, $20,000. In the settlement of these accounts, vouchers are filed in the Fund Commissioners' office, and allowed there, which do not specify the work to which the money covered by the voucher was actually applied. These accounts are kept against each Commissioner of Public Works, so as to enable the Fund Commissioners to see that no Commissioner of Public Works has at any one time more than $20,000. The drafts of the Commissioners of Public Works are, it is true, charged to some particular work; but the money often is paid to other works than those for which it was drawn; and the only way in

which each work is secured in its just appropriation, is the memoranda of the Commissioner of Public Works. He balances the accounts between the various works, by drawing the next time on some work to which the former appropriation or some part of it has been applied. By this mode, the records do not show truly and simply the actual application of the money drawn. An expedient for this may be found in a provision allowing the Commissioners of Public Works to draw the amount by law they may be authorized to have in their hands, without it being charged to any particular work; and, after disbursing this sum, to settle by vouchers, specifying the works on which it was paid, and then drawing again upon the works to which the money has been thus applied; and, at the final settlement of each Commissioner, the vouchers will account for all he has applied. Thus the Fund Commissioners may truly and certainly charge each work with the money actually applied.

It appears from inquiry, that after the works were put under contract, disbursements in large sums were constantly required of the Commissioners of Public Works; and, from the smallness of the sum in their hands, it was found inconvenient to confine the drafts in favor of contractors to sums over *twenty-thousand* dollars. Many contractors having small lettings, the Fund Commissioners have, to facilitate the operations on the works, construed the proviso to the 24th section of the Internal Improvement act, to mean any sum over one thousand dollars, without, in the opinion of the committee, any detriment to the State, though the proviso seems to warrant a different construction.

The committee would further state, that it appears that, under the original act, and it yet remains the law, the Commissioners of Public Works were required to procure the necessary iron. Under this, the Commissioners of Public Works, whose peculiar duty it is to superintend the putting of the works under contract, in paying contractors, providing engineers, and holding regular meetings of the Board, to locate roads, &c., could not well leave the State to provide the iron; besides, if all the Commissioners had united their $20,000, it would have been too small a sum to make a purchase of any adequate quantity, and the Fund Commissioners advancing for this purpose to them, would have been advancing only on their own responsibility, unauthorized by law. In fact, the Commissioners of Public Works should confine their labors entirely to the limits of the State, as it is believed then they will have as much to do as can be performed. Whatever iron has been bought, has been bought by the Fund Commissioners; whether expedient or in conformity with the law, the Legislature may better judge. The committee are satisfied that there has been nothing in that matter injurious to the State.

They have examined also into the matter of the distribution of the county money. The section of the law making the appropriation of $200,000 to the various counties in the State not benefitted by railroads or canals, was very defective; and it was almost impossible to distribute it as was intended. Those counties to which the money was coming could not, by any legal mode, satisfy the Commissioners that they were entitled, yet they had the right to the first money raised. In this emergency, the Fund Commissioners acted upon the representation of the Commissioners of Public Works, which they generally gave although it was not made their duty; and all the counties, through which no road or canal did pass, received their money on such statements when explicitly given; in all of which your committee see nothing to condemn in either of the Boards, as too great strictness of construction would have produced injustice. Under these regulations, the money has been paid to the order of the county commissioners' court, made in session, and receipted for by their agent.

This committee, in the early part of its session, requested to be furnished with an abstract of all the vouchers on file in the Fund Commissioners' office, which

has been done, and is herewith reported as a part of their labors of investigation.* Enough of those abstracts have been compared with the original vouchers and papers, to satisfy us that they are generally correct. As they were only procured to show generally the character and mode of payments made by the Commissioners of Public Works; and since it was impossible to go into a minute investigation of each particular item of expenditure; and since also the same information has been before this time presented to each branch of the Legislature, this committee submit them for the examination of that body.

This committee, after having seen from these abstracts allowances of contingent and travelling expenses to engineers and others, have come to the conclusion, that it is expedient and proper for them to express their opinion of the propriety of regulating generally the corps of engineers, limiting their number, and fixing definitely their salaries, and excluding all contingent allowances. If services have been, owing to any particular causes, *extraordinary*, any additional compensation ought to be sanctioned only by the Legislature, and by that power only finally adjusted and allowed.

Your committee have also examined the office of Fund Commissioners, to ascertain, if possible, how far it is serviceable to the system of Internal Improvement, independent of the duties of borrowing money to carry on the public works; and, from all we have been able to learn, we have come to the conclusion that, as a part of the system connected with its fiscal operation, and its aid in the safe and satisfactory *disbursement* of the public money, it is decidedly advantageous, and is indispensably necessary; and we are not convinced that any other substitute can be found, which will combine all the advantages that that office does, when taken in connection with that of the Board of Public Works. Another plan of borrowing money might be proposed, and another plan of auditing or checking the expenditures might be devised; but it would be rare if they could be so intimately connected with the system itself; and wherever the duties of that office, in the event of a change, might devolve, the same amount of duties would be required.

The committee, also, upon the examination into the office of Fund Commissioners, have found that there is, in the accounts of the late J. W. Stephenson, Commissioner of the sixth judicial circuit, a deficit of fourteen thousand seven dollars and and seventy cents; which fact is respectfully submitted.

The committee have been called only to specifications against two of the Commissioners of Public Works. The one, Murray McConnel, Esq., and the other, William Kinney, Esq.

The testimony in the latter case, was chiefly in relation to a charge of altering the ancient route of the western mail road. The testimony in regard to this charge is short, and needs no comment. It is therefore respectfully submitted, as placed on the journals of the committee.

The committee, upon their organization, adopted rules which required both question and answer, and all the testimony to be taken down in writing; and have come to the conclusion to express, as a committee, no opinion of its bearing upon the persons accused. Any opinion of the committee would be the subject of complaint with all those who differed with them; and it has been thought most proper to pronounce no judgment, but leave the testimony to the Legislature and to the public.

In the case of Mr. McConnel, the testimony is too voluminous to scan it in a reasonable time, and with that accuracy which would be required in a report to be preserved on your records. They therefore respectfully submit this their report, and the accompanying documents, and ask leave to be discharged from the further consideration of the subject.

* The abstracts referred to have been printed in the report of the Commissioners of Public Works.

JOURNAL

OF

THE JOINT SELECT COMMITTEE OF INVESTIGATION.

Joint Resolution of the two Houses of the General Assembly of the State of Illinois.

"*Resolved by the Senate and the House of Representatives*, That a joint select committee, consisting of four members of the Senate, and seven members of the House of Representatives, be appointed to investigate all charges and complaints which may be preferred against any member or members of the Board of Public Works; and that said committee shall have power to examine witnesses, take depositions, and send for persons and papers, and do such other things as may seem to them indispensably necessary towards obtaining a full, fair, and complete investigation; and that said committee are required to examine the books, accounts, and vouchers, of the Commissioners of the Board of Public Works, and of the Fund Commissioners.

"That they also examine whether any of said Commissioners have violated any of the provisions of the "Act to establish and maintain a general system of Internal Improvement," or of any of the acts supplementary thereto; or whether any of said Commissioners have given such an interpretation to any of said acts as tends to the detriment of the State, or to bring discredit and suspicion on the officers charged with the enforcement of said acts; and that they have leave to report by bill or otherwise, if, in the opinion of said committee, the present laws have been found insufficient to protect the interests of the State."

"Said committee are hereby authorized to employ a clerk, to keep a record of their proceedings, and take down such testimony as the committee may direct; and the examination of all witnesses shall be made under oath.

Committee on the part of the Senate: Messrs. Gatewood, Hacker, Browning, and Richardson.

Committee on the part of the House: Messrs. Thornton, Hardin, Robinson French, Calhoun, Naper, and Roman.

THURSDAY, January 3, 1839.

The joint select committee, appointed under the resolution on the preceding page, met in the Senate Chamber.

Present: Messrs. Gatewood, Hacker, and Browning, of the Senate; Messrs. Thornton, Hardin, Robinson, French, Calhoun, Naper, and Roman, of the House of Representatives.

Mr. Gatewood was chosen chairman of the committee.

The committee appointed Andrew Johnston their clerk.

The committee then adjourned until the next evening, at 7 P. M. at the committee room.

FRIDAY, January 4, 1839, 7 p. m.

The committee met, pursuant to adjournment, at their room.

A communication to the chairman, from A. Brockenbrough, presenting certain charges against Murray McConnel, Commissioner of the Board of Public Works, and acting Commissioner of the first judicial circuit, was received, and read.

On motion of Mr. Naper,

The Sergeant-at-arms was sent to notify Messrs A. Brockenbrough and A. G. Herndon to appear before the committee immediately.

Messrs. Brokenbrough and Herndon appeared.

On motion of Mr. Browning,

Resolved, That the chairman of the committee be requested to issue subpœnas for Austin Brockenbrough, James M. Bucklin, Thomas T. January, James Waldo, and Charles Oakley, returnable to the next meeting of the committee.

On motion of Mr. Calhoun,

Resolved, That Mr. McConnel be furnished a copy of the charges preferred against him by Mr. Brockenbrough, and that he be requested to inform the committee if he has any witnesses that he wishes to be subpœnaed on his behalf; and that he furnish the names and residence of the persons, if any, he may wish to give testimony in his behalf.

On motion of Mr. Browning,

Resolved, That a sub-committee of three be appointed to draft rules for the government of the joint committee of investigation, and that they report to the next meeting.

Ordered, That Messrs. Browning, Thornton, and Calhoun, be that committee.

Present at this meeting: Messrs. Gatewood, Hacker, Browning, and Richardson, of the Senate; Messrs. Thornton, Hardin, French, Calhoun, Naper, and Roman, of the House of Representatives.

The committee then adjourned until Monday, 7th January, at half past six P. M.

MONDAY, January 7, 1839, 6½ p. m.

The committee met, pursuant to adjournment, at their room.

Mr. Browning, from the sub-committee appointed to draft rules, reported the following, which were read and adopted:

Rules.

1. A majority of the committee shall constitute a quorum to do business.

2. The committee shall be governed in all its proceedings by the rules of the House of Representatives, except as is herein otherwise provided.

3. At every meeting of the committee, the clerk shall take down the names of the members of the committee present, and shall keep a record of all motions and resolutions presented for the consideration of the committee.

4. The committee will investigate all charges made against any of the officers, engineers, or agents of the Internal Improvement system, which are or may be preferred, in writing, by a responsible individual. They will also examine into the conduct of any of said officers, engineers, or agents, when requested by any two members of the committee.

5. When a witness is under examination before the committee, any member of the committee shall be at liberty to interrogate him; and every verbal question, asked by a member of the committee, shall be answered verbally, if insisted upon by two or more members of the committee.

6. If any written question be objected to by a member of the committee, the witness under examination shall not be compelled to answer the same, unless required to do so by at least three of the members of the committee present.

7. No questions shall go upon the journals of the committee, except such as are proposed in writing; nor shall any answers of witnesses go upon the journals, except such as are made in reply to written questions.

8. The yeas and nays on any question shall be taken, when requested by any two members of the committee.

9. No person shall be admitted before the committee, except by special order of the committee*.

A communication from Murray McConnel, to the chairman of the committee, was laid before the committee, and read.

On motion of Mr Naper,

Mr. Brockenbrough was sworn to give testimony, in connection with the charges preferred by him.

On motion, Mr. McConnel was admitted.

On motion of Mr. Browning,

The following additional rule was adopted:

10. When witnesses are under examination before the committee, in connection with charges preferred against any person, the person charged, and the person making the accusation, shall be permitted to be present, but shall ask no question, except through a member of the committee.

On motion of Mr. Hardin,

Resolved, That the committee now determine which of the charges and specifications exhibited against Murray McConnel they will proceed to investigate.

Mr. Thornton asked of the witness, A. Brockenbrough, the following written question:

From whom do you derive your information upon which you predicate your charge, that Mr. McConnel has violated the 47th section of "An act to establish and maintain a general system of Internal Improvements," in force the 27th February, 1837?

Answer: From James E. Waldo, of Meredosia.

Resolved by the committee, That they proceed to investigate the first specification of the first charge.

The question above asked by Mr Thornton was asked, in relation to the second specification of the first charge. The same answer was returned.

Resolved, That the committee investigate the second specification of the first charge.

Resolved, That the committee investigate the second charge.

Resolved, That the committee investigate the third charge; and that time be allowed said McConnel for his defence.

Question by Mr Thornton: From whom did you derive the information that Mr. McConnel paid out promissory notes, as cash, to engineers and others, and received credit for them, as cash, in his accounts with the Fund Commissioners?

*Repealed, 31st January.

Answer: From Mr. Bucklin, now an engineer; and Mr. Von Horn, formerly an engineer.

Resolved, That the first and second specifications of the fourth charge be investigated.

Question by Mr. Thornton: From whom did you derive the information contained in the third specification of the fourth charge?

Answer, From James E. Waldo:

Resolved, That the third specification of the fourth charge be investigated.

The question—"Shall the first additional specification to the fourth charge be investigated?" was decided, by yeas and nays, in the negative.

Those who voted in the affirmative, are. Messrs. Browning, Calhoun, Hardin, and Gatewood—4.

Those who voted in the negative, are, Messrs. Richardson, Hacker, Naper, Roman, Thornton, and Robinson—6.

Resolved, That the second additional specification to the fourth charge be not investigated.

Resolved, That the third additional specification to the fourth charge be investigated.

Resolved, That the fifth charge be investigated.

On motion of Mr. Hardin,

Resolved, That the witnesses required in this investigation be subpœnaed to attend before this committee, on the 21st inst., to give testimony; at which time the committee will proceed to hear all the testimony in the case.

And then the committee adjourned until Thursday next, at half past six P. M.

Present at this meeting: Messrs. Gatewood, Hacker, Browning, and Richardson, of the Senate; Messrs. Thornton, Hardin, Calhoun, Robinson, Naper, and Roman, of the House of Representatives.

THURSDAY, January 10, 1839. 6½ P. M.

The committee met, pursuant to adjournment, at their room.

Present: Messrs. Hacker, Richardson, and Browning, of the Senate; Messrs. Thornton, Hardin, Roman, Naper, Robinson, and Calhoun, of the House of Representatives.

A communication, from A. Brockenbrough was received and read.

Mr. McConnel proposed to the committee that the depositions of certain witnesses in Morgan county should be taken, instead of requiring their personal attendance; which was agreed to.

On motion of Mr. Calhoun,

Resolved, That Mr. McConnel be permitted to proceed to Jacksonville, to take the depositions of such witnesses as find it inconvenient to attend before this committee; that Mr. Brockenbrough be also permitted to procure the depositions of such persons as cannot attend before this committee; and that the said depositions be taken before any two justices of the peace of Morgan county, one of whom shall reside in Jacksonville.

On motion of Mr. Browning,

Resolved, That the depositions above referred to be taken on the 17th instant, and that the justices continue from day to day until they complete the same; due notice being given of the time and place of taking the same, by Mr. McConnel to Mr. Brockenbrough, and by Mr. Brockenbrough to Mr. McConnel, respectively, before proceeding to take the same.

Resolved, That the Secretary furnish copies of the foregoing resolutions to Messrs. McConnel and Brockenbrough immediately.

The following communication was laid before the committee by Mr. Hardin:

SEWARD'S, *January* 9, 1839.

SIR: In my charge against McConnel for neglect of duty, (the last charge) I state that his accounts were rendered to the Board of Public Works; I ought to have said to the Board of Fund Commissioners. I want Mr. Mather summoned to-morrow, on that and other charges, per my schedule.

Respectfully,
A. BROCKENBROUGH.

To J. J. HARDIN,
Member of the Committee of Investigation.

The committee agreed to take the evidence of Thomas T. January, in relation to the first specification of the first charge, preferred by A. Brockenbrough against M. McConnel, which said specification is in these words:

"CHARGE FIRST.—Violation of the 47th section of the act.

"*Specification First.*—In this, that the said Murray McConnel, Commissioner as aforesaid, did, whilst acting Commissioner of the Board of Public Works for the first judicial circuit, enter into a contingent contract, bargain, and understanding, with James E. Waldo and Daniel Waldo, citizens of the town of Meredosia, in the county of Morgan, and State of Illinois; in which said McConnel agreed and bound himself to purchase, of said James E. Waldo and Daniel Waldo, a certain tract or parcel of land, lying within the limits of said town of Meredosia, which is a designated point on the Northern Cross railroad; which said purchase and sale, by said Waldos to said McConnel, was made and entered into, on or about the 21st day of April, 1837, in the town of Jacksonville, in the county and State aforesaid; and which said purchase, by said McConnel, was made after said McConnel had been appointed to and accepted of the office of Commissioner of the Board of Public Works, and previous to the location of said Northern Cross railroad to and through said town of Meredosia having been publicly made known; and that, when said location was made, it passed entirely through, and immediately in contact with, said purchase; and for which said McConnel promised to pay the sum of eight thousand three hundred and thirty-three dollars and thirty-three cents, or thereabouts."

An instrument in writing was laid before the committee, in the words and figures following, to wit, with an erasure in the fifth line, and an interlineation above it:

"JACKSONVILLE, *January* 5, 1837.

"I hereby agree and contract with James E. Waldo and Daniel Waldo, that if they can effect a purchase of Joseph Duncan, of all his interest in the town of Meredosia, the ferry excepted, or a part of his said interest in said town, at a rate not to exceed twenty-five thousand dollars for all said interest, said ferry excepted, on a credit not less than ten years, that I will take of them, at cost, at least one-third of said purchase; provided it is made within six months from this date; and provided, they do not give more than eight per cent. interest on the purchase money, said Duncan having the privilege to reserve ten of the lots, already laid out, for the Illinois college, to be designated by said Waldos; and also ten lots more of the land not yet laid out, when it shall be laid out, for said college, to be designated by said Duncan.

M. McCONNEL."

Thomas T. January was sworn, and gave the following testimony, in reply to the questions proposed:

Question 1, by Mr. Hardin: State what you know of Mr. McConnel purchasing any lots of land of J. E. and D. Waldo, in Meredosia. Was there a written con-

tract; if so, state if you know, whether it was signed by Mr. McConnel, and in whose hand-writing said contract was written?

Answer: I know that Murray McConnel did make a contract with Mr. J. E. Waldo, to take one-third of said Waldo's purchase of a lot of land in the town of Meredosia, from the fact of seeing a contract, drawn up by Mr. Waldo, and signed by Mr. Murray McConnel. (The contract, copied on the preceding page, was here shown to Mr. January before asking him the next question, No. 2.)

Question 2, by Mr. Browning: Is the contract here exhibited the one of which you speak, and is the signature Mr. McConnel's hand-writing?

Answer, I think it the same: It has been some months since I saw it, and could not say positively it is the same. I believe the signature to be Mr. McConnel's hand-writing.

Question 3, by Mr. Naper: Do you know, or have you heard, of any other contract between said Waldos and McConnel, in relation to the subject of said contract, except the one here exhibited?

Answer: I do not.

Question 4, by Mr. Hardin; Did Messrs. J. E. and D. Waldo purchase the lots, named in said contract, of Joseph Duncan; and, if so, were any of said lots situated on the line of the Northern Cross railroad?

Answer: I was informed by both Mr. Waldo and Joseph Duncan, that the purchase was made of Duncan. There is no lot, included in that purchase, situated immediately on the line of the Northern Cross railroad as now located.

Question 5, by Mr. Hardin: How far is any one of the lots in said purchase from the line of said railroad?

Answer: Between thirty and sixty feet.

Question 6, by Mr. Thornton: Were you aware of the date of the contract in question, before it was exhibited to you this evening?

Answer: Yes.

Question 7, by Mr. Hardin: Do you know whether Mr. McConnel was not at Vandalia during all the month of January, 1837?

Answer: I do not recollect positively whether he was or not.

Question 8, by Mr. Thornton: Have you any knowledge whether the contract now shown you is the one to which Mr. Brockenbrough alludes, when he says, in his charge against Mr. McConnel, that the said McConnel entered into a contingent contract, bargain, and understanding, with Mr. Waldo?

Answer: It is the same.

Question 9, by Mr. Browning: Were any of said lots on the line of the Northern Cross railroad, as originally located? Has the location of said road been changed; and, if so, how was that change effected; and was it ordered to be made by Mr. McConnel, or was it made by the engineer, without his (McConnel's) direction?

Answer: There were lots on the line of the original location of the Northern Cross railroad. The location has been changed. Mr. McConnel told James Dunlap and myself to say to Mr. J. M. Bucklin, to alter the location if he thought it advisable—and was changed by Mr. J. M. Bucklin.

Question 10, by Mr. McConnel: Do you know where said property, then belonging to Joseph Duncan, was situated in Meredosia?

Answer: I could not point out all the particular lots. I have only an idea of their general locality.

Question 11, by Mr. McConnel: When was the purchase made of Duncan?

Answer: As near as I can recollect, it was in the spring of 1837.

Question 12, by Mr. McConnel: What was the character of the purchase, and what particular lots were purchased, and in what addition were the lots situated?

Answer: The character of the purchase was, that said Waldo was to pay said Duncan in a certain time, with interest, for the greater portion of his (Duncan's) interest in Cobb and Aylesworth's addition to the town of Meredosia, and in the original town plat. I cannot say what particular lots were purchased.

Question 13, by Mr. McConnel: Does the road, as now located and completed, touch any part of Cobb and Aylesworth's addition, and was not all of Duncan's interest in one of those additions?

Answer: It does not. I have always understood that a part of Duncan's interest was in the original plat of the town of Meredosia.

Question 14, by Mr. McConnel: Did not you, as contractor, by order of the engineers, commence work near one mile from Meredosia; and was not that so ordered because the location was not finally made in Meredosia?

Answer: I did, as contractor, commence about one-half mile from the termination of the Northern Cross railroad, at the Illinois river, to make fills and excavations. I did not understand that the road was not permanently located, when I commenced excavating and filling, as I had previously cleared the whole of timber, up to the termination of original location. When the clearing was done, the side stakes were not driven, only the cut and fill marked on the centre stakes.

Question 15, by Mr. McConnel: Was the first line run, and the one spoken of by you as a location, any thing more than a random line; and was not the road, as now built, put upon the real and proper location?

Answer: I understood that the first line was intended to have been a permanent location. The road, as now made, I understand to be a change of that location.

Question 16, by Mr. Hardin: From whom did you understand that the first location was a permanent one? and, if you ever had any conversation on this subject with Mr. McConnel, state it.

Answer: I understood this from Mr. McConnel and James M. Bucklin.

Question 17, by Mr. Calhoun: Do you know why the location was changed?

Answer: I was informed by Mr. J. M. Bucklin, chief engineer, that the reason he changed the location of the Northern Cross railroad at the town of Meredosia was, that the change was on the best ground, provided a bridge was ever thrown over the Illinois river, by permission from Murray McConnel to make said location where he deemed most advisable.

Question 18, by Mr. McConnel: Are you not informed that Mr. James E. Waldo wrote me a letter proposing a bribe to locate the depot upon his land? State your information upon that subject.

Answer: I was informed by Mr. McConnel that Mr. J. E. Waldo had offered him a bribe to terminate the Northern Cross railroad at Meredosia, on his land or lots.

Question 19, by Mr. Calhoun: Do you know any thing from Mr. Waldo in relation to the alleged offer of a bribe?

Answer: I know that Mr. Waldo admitted to me that he had written Mr. McConnel a lettter, making him some proposition about taking some of his property in Meredosia for a depot, which he (Waldo) considered in the form of a bribe.

Question 20, by Mr. Calhoun: Did you ever hear McConnel speak of possessing any property in the town of Meredosia, acquired under the alleged purchase of Waldo?

Answer: No.

Question 21, by Mr. McConnel: In the location of the road or the depot at Meredosia, did you ever hear Mr. McConnel say any thing about, or allude to, any interest that he had in Meredosia, as having been purchased from Waldo?

Answer: I never heard Mr. McConnel allude to, or speak of, any interest he had in the purchase from Gov. Duncan, either on the line of the road, or at its termination at Meredosia.

Question 22, by Mr. McConnel: When McConnel told Mr. Dunlap and yourself that Mr. Bucklin should go down and locate the road permanently at Meredosia, was any thing said by McConnel where it should be located, or did he allude in any way to his (McConnel's) interest in said town?

Answer: When Mr. McConnel requested James Dunlap and myself to tell Mr. Bucklin to change the location of the Northern Cross railroad at Meredosia, he did not say where said change should be made, or where it should strike the Illinois river; nor did he allude in any way to any interest he had in said town.

Question 23, by Mr. McConnel: Are you not informed of the making of the following proposition: That Mr. James E. Waldo informed me, before the June court, that he had been notified, by certain persons in Jacksonville, that he (Waldo) was to be called upon to go before the grand jury with a view of indicting me as Commissioner; and that said Waldo then proposed that, if I would locate the depot upon his land, he would clear out to the Black Hawk Purchase, and would not appear before the grand jury; but, if I did not do so, he would go before the jury, and have me indicted in some way or other?

Answer: I have heard something of this before; but when, where, or the particulars thereof, I have no distinct recollection, which would enable me to state the circumstances connected with it.

The committee agreed to examine James E. Waldo in relation to the same charge and specification.

James E. Waldo was sworn; the bond or contract herein before copied was shown to him, and he gave his testimony as follows, in reply to the questions proposed:

Question 1, by Mr. Hardin: State whether you know that a contract between M. McConnel and J. E. and D. Waldo, shown here, was executed on the day it bears date, or at any other time; and, if so, state the time.

The question was objected to; and the question was put to the committee—"Shall the question proposed be asked of the witness?" and decided, by yeas and nays, as follow:

In the affirmative—Messrs. Browning, Hardin, and Thornton.

In the negative—Messrs. Hacker, Naper, Roman, Calhoun, and Robinson.

The question being required by three of the members present, under the 6th rule, (page 8 of this journal) was then asked of the witness.

Question 1, by Mr. Hardin: State whether you know that a contract between M. McConnel and J. E. and D. Waldo, shown here, was executed on the day it bears date, or at any other time; and, if so, state the time.

Answer: It was executed, as near as I recollect, on the 21st April, 1837. My reasons are these for thinking so. On that day I paid Joseph Duncan, for Lewis Giberson, $80, and took his receipt, which bears date 21st April, 1837; and I believe that is the day. It was not made on the 5th day of January, 1837.

Question 2, by Mr. Browning: Why was that contract dated on the 5th January, 1837, when it was really made on the 21st of April?

This question was objected to; and was ordered to be asked of the witness, by the following vote of the committee, taken by yeas and nays:

In the affirmative, Messrs. Naper, Roman, Robinson. Browning, Hardin, and Thornton—6.

In the negative, Messrs. Hacker, and Calhoun—2.

Question 2, by Mr. Browning: Why was that contract dated on the 5th January, 1837, when it was really made on the 21st of April?

Answer: I think I drew up the contract and dated it, without consulting McConnel. My reasons for ante-dating it were, that McConnel required that a contract we made for four lots in Meredosia, about four weeks before, should be dated 5th January, 1837; therefore I supposed he would wish this dated back 5th January, 1837.

Question 3, by Mr. Hacker: Who made the interlineation in the contract, and was it made after or before signing it?

Answer: I made it, with Mr. McConnel's consent, and after his signing it. I wrote it in the market-house, and then showed it to McConnel. He took it into the post-office and brought it back signed, and a part of it struck out. I asked him why he struck it out, and he said it was surplusage. I said I thought it an important part of the contract; and he said, if I thought so, I might so fix it.

Question 4, by Mr. Hacker: Was the interlineation made in the presence of McConnel, and how long after the signing of it?

Answer: It was not in his presence. I went immediately into the market-house, and it was made as soon as I could go back there—I did as he told me to do. It was the same day; might have been five minutes after the signing, or might have been two.

Question 5, by Mr. Naper: Was it shown to McConnel after the interlineation?

Answer: It was not—not to my knowledge.

Question 6, by Mr. McConnel: Did you ever show me that contract until to-night?

Answer: I dont know that I ever have, since it was signed.

Question 7, by Mr. Hardin: Was the substance of the contract talked over between you and Mr. McConnel, before you wrote it down?

Answer: I talked to Mr. McConnel about his taking an interest, as he told me he would, previous to the purchase, and he rather objected to its being put in writing, but agreed to the purchase, and told me he could trust to my honor, and I could trust to his.

Question 8, by Mr. Thornton: Was the instrument drawn after the purchase from Duncan?

Answer: It was drawn after the purchase from Duncan. The purchase from Duncan was 31st March, 1837.

Question 9, by Mr. Thornton: Have you any other testimony than your own, that the date of the contract is not the true one?

Answer: I dont know that I have, unless it should be Governor Duncan.

Question 10, by Mr. Thornton: Do you know why McConnel wished the contract before you ante-dated?

Answer: I do not know that he did wish it ante-dated. I ante-dated it because he wished a previous contract ante-dated. I supposed that he wanted it to be dated before the passage of the act.

Question 11, by Mr. McConnel: Did you inform McConnel, when he signed the contract before you, that you had already purchased from Duncan the property named in the contract?

Answer: Mr. McConnel and I talked of making the purchase about March court. When I came to town the day the contract was signed, I met him at the market steps. He said: "Well Waldo, you have made that trade with Duncan—it was a very good trade." I understood from his conversation, that he knew I had made the trade with Duncan.

Question 12, by Mr Hardin: Was the agreement between yourself and Mr. McConnel made before the 21st of April, and before it was written out by you; and was it made before you made the purchase of Governor Duncan?

Answer: During the session of March court, I understood Duncan wished to sell out his property in Meredosia. I told McConnel of it, he advised me to go and

buy it if I could, and he would take an interest in it; that was all the agreement he made with me.

Question 13, by Mr. Thornton: Did you believe, at the time the first contract for the four lots was entered into between yourself and McConnel, that McConnel wished the contract ante-dated, to evade the 47th section of the Internal Improvement law of 1837?

Answer: That was my understanding, sir; that was my belief. I dont know that he made any such statement; I don't think he did.

Question 14, by Mr. Hacker: Why did you not present the contract to Mr. McConnel since your purchase of Duncan?

Answer: I have spoken to him several times of taking up that, and entering into one with Duncan; but never have presented it to him. I think about the 5th day of July, I mentioned to him about taking that up, and going into that with Duncan; he said he was not going to take any of it; I asked him if he was not going to take any of it; he said, not till after the road was located.

Question 15, by Mr. Naper: Has the contract ever been consummated between you and McConnel; and has any part of the property come into the possession of McConnel?

Answer: No further than that contract would make it in his possession.

Question 16, by Mr. Naper: Has he ever exercised ownership over it?

Answer: He never has.

On motion, the committee adjourned until half past six P. M. to-morrow.

FRIDAY, January 11, 1839, 6 ½ P. M.

The committee met pursuant to adjournment.

Present, Messrs Gatewood, Hacker, and Browning, of the Senate; Messrs. Thornton, Hardin, Naper, and Roman, of the House of Representatives.

On motion, the committee adjourned until Monday January 14, at half past six P. M.

MONDAY, January 14, 1839, 6½ P. M.

The committee met pursuant to adjournment.

Present, Messrs Gatewood, Hacker, and Browning, of the Senate; Messrs. Thornton, Hardin, Naper, Roman, Calhoun, French, and Robinson, of the House of Representatives.

A communication from John Murray, handed to the Chair by Mr. Roman, was received and read.

On motion of Mr. Browning,

Resolved, That no one member of the Board of Public Works has authority or power to change or alter the locatin of the Great Western mail-route, without the order and direction of the Board of Public Works.

Mr. Roman presented to tne Chair a communication from J. W. Bradsby; which was received and read.

Mr. Roman offered the following resolution:

Resolved That the act of entering upon the lands of individuals, without first asking for the right of way, is a violation of the 27th and 28th sections of the Internal Improvement act.

Mr. Calhoun moved to amend, by striking out the words "asking for," and inserting 'obtaining," in the lieu thereof.

Mr. Calhoun withdrew his motion.

The question was then taken on adopting the resolution, by yeas and nays, and decided in the affirmative, as follow:

Those voting in the affirmative, are, Messrs. French, Robinson, Hacker, Hardin, Browning, Roman, Calhoun, and Gatewood—8.

Mr Naper voted in the negative.

Mr. Hardin proposed the following resolutions:

Resolved, That it is the duty of the Commissioners of the Board of Public Works, when any person, through whose land a railroad may be located, refuses to donate the right of way, to proceed forthwith, on notice of such refusal, to obtain the right of way according to the provisions of "An act concerning the right of way," approved 28th February, 1833.

Resolved, That any neglect or refusal of said Commissioner to proceed to obtain the right of way, in a case as aforesaid, is a violation of his duty.

The question was taken by yeas and nays, on the adoption of the resolutions, and decided in the negative, as follow:

Those voting in the affirmative, are, Messrs. Roman, Calhoun, Browning, and Hardin—4.

Those voting in the negative, are, Messrs. French, Robinson, Hacker, Naper, and Gatewood—5.

A communication from M. McConnel was received and read.

On motion of Mr. Calhoun,

Resolved, That a sub-committee of three be appointed to examine the accounts of the Board of Fund Commissioners, and report to this committee the result of such investigation.

Ordered, That Messrs. Calhoun, Hacker, and Thornton, be that committee.

And then they adjourned until Wednesday, January 16, 1839, at half past six P. M.

TUESDAY, January 15, 1839, 6 P. M.

A called meeting of the committee was held at the office of the Fund Commissioners; and, after some time spent in examining the books and papers, the committee adjourned.

WEDNESDAY, January 16, 1839, 6½ P. M.

The committee met pursuant to adjournment.

Present: Messrs. Gatewood, Browning, and Richardson, of the Senate; Messrs. Hardin, Calhoun, Roman, and Robinson, of the House of Representatives.

Mr. Browning offered the following resolution:

Resolved, That this committee now proceed to the examination of the witnesses and papers in support of the charges which have been preferred against M. McConnel, Commissioner of Public Works, and that the committee continue from day to day until the investigation be completed; which,

On motion of Mr. Hardin,

Was laid on the table.

On motion of Mr. Richardson,

Resolved, That the Clerk be required to issue subpœnas for the following witnesses, to wit, William Pollock, James L. McKinney, L. E. H. Houghton, Joseph Duncan, Joseph C. Thompson, Winfield S. Wilkinson, Harvey Finch, William French, and T. C. Fogus; and said witnesses to be summoned to appear before the investigating committee on the 24th of the present month.

And then the committee adjourned till to-morrow evening, at 7 o'clock P. M., at the office of the Fund Commissioners.

THURSDAY, January 17, 1839.

The committee met, pursuant to adjournment, at the office of the Fund Commissioners, at 7 P. M.; and after some time spent in examining their books and papers,

The committee adjourned, to meet at their room on Thursday, the 24th instant, at 6½ P. M.

THURSDAY, January 24, 1839.

The committee met pursuant to adjournment.

Present: Messrs. Gatewood, Hacker, Browning, Naper, and Roman.

A communication from James E. Waldo was received.

Copies of certain abstracts of vouchers, filed in the office of the Fund Commissioners, by Murray McConnel and Wm. Kinney, Commissioners of the Board of Public Works, were received.

And then the committee adjourned, to meet on Friday, the 25th instant, at 7 P. M.

FRIDAY, January 25, 1839.

The committee met pursuant to adjournment.

Present: Messrs. Gatewood, Hacker, and Browning, of the Senate; Messrs. Naper, Roman, Robinson, Calhoun, and Hardin, of the House of Representatives.

A communication, received yesterday from James E. Waldo, was read to the committee.

Mr. Brockenbrough laid before the committee sundry additional specifications to the charges against Murray McConnel, Commissioner, &c.; which were read.

And then the committee adjourned until Monday, the 28th instant, at 7 P. M.

MONDAY, January 28, 1839.

The committe met pursuant to adjournment.

Present: Messrs. Gatewood, Hacker, Browning, and Richardson, of the Senate; Messrs. French, Naper, Hardin, Roman, Thornton, and Calhoun, of the House of Representatives.

A. Brockenbrough preferred another charge and specification against Murray McConnel, Commissioner of the Board of Public Works.

Joseph Duncan was sworn as a witness, and the first specification of the first charge against Murray McConnel was read to him. The examination proceeded as follows:

Question 1, by the Chairman: State what you know in relation to the first specification of the first charge, just read to you.

Answer: I did not know, at the time of my contract with Waldo, that McConnel had any interest in it.

Question 2: State the date of the contract between you and Waldo.

Answer: 31st March, 1837.

Question 3: Describe the property embraced in your contract with the Waldos.

Answer: It consisted of certain lots in the original town of Meredosia, and in Cobb and Aylesworth's addition to said town; and some land not sub-divided into lots, in the same quarter section as that addition.

Question 4: Was the railroad located at the time of purchase?

Answer: It was not, at that time.

In answer to other questions not taken down, Mr. Duncan gave testimony as follows:

Answer to question 5: The Northern Cross railroad runs, as he thinks, through several of the lots sold to Waldo, but he is not positive; thinks he may be mistaken.

Answer to question 6: If the railroad does not run through the lots, it does not touch the land not laid out, which is a quarter of a mile off, or more.

Answer to question 7: The land not laid off in lots is within a mile, or less, of the railroad.

Answer to question 8: There was no contract between himself and the Waldos relative to this land, as early as the 5th January, 1837. No negotiation was ever attempted between himself and the Waldos, at any time previous to the 31st March, 1837, touching the Meredosia property sold by him to the Waldos.

Answer to question 9: He knows the contract was made after the law passed, and supposes it was on the day his (Duncan's) bond was dated, 31st March, 1837. It was delayed for security, whether for more than a day or two, or not, he does not recollect. *

Answer to question 10: He never had any conversation with McConnel about the purchase, previous to the purchase; none, except since he was summoned as a witness by this committee.

Answer to question 11: He does not know that McConnel ever bought any property of him (Duncan.) Mr. Wiggins told him that McConnel bought a lot of him, which he (Duncan) had an interest in. He does not know when it was purchased; does not know of McConnel's buying any other property in Meredosia; was never present at any bargain made by him.

Answer to question 12: If there had been a contract made on the 5th January, 1837, he would not have asked as much as $25,000 for it (the property;) or, at all events, would have taken less. The property in Meredosia had been dull, but the passage of the railroad act increased its supposed value.

Question 13: by Mr. Browning: In your contract with the Waldos, you reserve the right to select ten lots in the town of Meredosia, for the use of Illinois college. Could the Waldos, prior to that contract, have known that you had any intention of reserving such lots for the use of the college?

Answer: The Waldos could not have known his intention to reserve the lots, prior to the contract; at least they did not know it from him, nor was it a matter of public notoriety. He had made a memorandum in his own books, and may have given a memorandum to the treasurer of the college.

Daniel Waldo was sworn, as a witness to the first specification of the first charge, and the third specification of the fourth charge, and examined as follows:

The first specification of the first charge being read to him, he was interrogated.

Question 1: State all you know in relation to that specification.

Answer: James E. Waldo was at Jacksonville, at the March court in 1837. He came home, and said that he and McConnel had had some talk of a contract about land to be bought of Duncan. I told him to make what bargain he pleased with McConnel. He went away, and came back for a power of attorney from me. He afterwards brought back a bond from McConnel, which I objected to, because it was ante-dated.

(The bond on file among the papers of the committee, and a copy of which is preserved, marked, was shown to the witness, and identified as the same.)

* The original bond, from Duncan to the Waldos, was produced to the committee at the time of putting question 9; and a copy is preserved among the papers.

McConnel and I had several conversations afterwards, about the contract, and McConnel wanted me to give up the bond.

The whole affair of the contract, between J. E. Waldo and McConnel, was going on from the last Monday in March to the last of April.

The conversations with McConnel were had when McConnel was at Meredosia last fall, and another time at Jacksonville, in December, 1837, when they talked of altering the location of the road. He told McConnel, if altered, their property at Meredosia would not be so valuable. McConnel replied, the location should not be altered.

The power of attorney was executed when he (James E. Waldo) came home during the session of court.

Question 2: Has McConnel exercised any ownership over the property?

Answer: He never sold any of it, that I know of. In our conversations, he spoke of it as *our* property—which location would be of most advantage to our property.

He never had any conversation with McConnel about the date of the bond.

He believed the contract was void in law, because it bore a wrong date; and McConnell could prove he was not in Jacksonville on the 5th January, 1837.

James E. Waldo assigned, as a reason for ante-dating the contract, that McConnel and he had conversations about that bond, (the same bond shown to him, as stated above.)

They had no contract with McConnel on the 5th January. They bought no land of Duncan in Meredosia, except that; had no other contract with Duncan, except their mortgage to him.

He had no conversation with McConnel, until he came down to locate the road. They never spoke of the ante-date.

He had a conversation with McConnel last fall. McConnel asked him for money they owed him. He (Waldo) said they had advanced something on the Duncan contract. McConnel said, when he settled that, he should settle the whole, did not want it connected with other matters.

Question 3, by Mr. Hardin: Have you and M. McConnel had any conversation about the bond given by M McConnel to J. E. and D. Waldo? If so, state what transpired between you in those conversations.

Answer: My first conversation with Mr. McConnel was at Meredosia, when he came down with Bucklin to lay off the railroad. They talked about the starting point; and which way would be of most advantage to the Duncan purchase—to the property we (McConnel and I) had there. "Our property" were the words. It started on one of the lots we bought of Duncan.

Our second conversation was in Jacksonville, when Jos. Thompson and I went up to see if they would let us commence work nearer in town. I told McConnel I feared he would alter the location of the road, which would injure the value of our property. McConnel said: "By God Almighty, Daniel, there shall be no alteration in the location of that road."

Our next conversation was this last fall—last September or October. McConnel was at Meredosia, the first time he was there this fall. McConnel said we were owing him money, and he wanted us to pay it. I told him we had paid about $3,000 on the Duncan purchase, had advanced considerable money for him, and calculated to take it out of that. He replied he did not want it to go that way; when he paid that contract, he wanted to pay the whole, to pay it all at once; said he and James E. Waldo had been making some arrangement; he understood that was to be given up. I told him there had been talk about it; I understood from James, he was unwilling to give it up. I was willing to give it up, if he would give me something reasonable. He said he would like to have it given up; and we would settle every thing all up between us. The proposition

McConnel made, was to square all between us. He said "I will square all accounts between us, and will give you the depot on the other side to build—the water was low, and it could be built for the advantage of the State, and cheaper." I told him I would do it; I would give up the papers; and I set a day to go to Jacksonville to do it. When I went to get the papers, I could not get them; James had them, and was not willing to give them up. He said the depot should be the same as that built by January and Dunlap, on this side the river; the same as they were about to build.

Question 4: Would you have given up the bond merely for the balance between you, without the depot?

Answer: I would not.

Question 5, by Mr. Browning: Did you and Mr. McConnel ever make a contract for the building of said depot; and, if so, what were its terms?

Answer: McConnel brought a contract down, for me to make copies of, and execute. The terms were, that I should build the depot for the same as January and Dunlap had agreed to make one for. It was to be a similar depot to that they were to build at Meredosia, and was to be made according to the estimates of engineers. Said contract was never executed. The reason why I did not insist on the contract was, because I could not comply with the contract. I could not get the bond to give up to him.

Question 6, by Mr. Hardin: Did you believe that Mr. McConnel had a right to let out the building of a depot, without advertising for proposals?

Answer: I did believe that he had. He showed me the statute, which he said would justify him in doing it. I believed that it was legal, from his showing me the statute.

Question 7, by Mr. Browning: Did Mr. McConnel endeavor to persuade you not to come to Vandalia, as a witness on this occasion? If so, state what he said to you.

Answer: When I was coming here, he said he wanted I should go back, that he might take my deposition. He had an authority to take my deposition and others, before two justices in Morgan. He wanted me to go back, and, as a justice, help to take the depositions of others. The conversation took place at Detheridge's, between here and Jacksonville, as Mr. McConnel was going home, and I was coming here. I was not then summoned to come as a witness. McConnel notified Brockenbrough to go back to take depositions. It was not a private conversation; others were in the room.

Question 8, by Mr. McConnel: When you offered to give up that bond, upon the condtion that you could have the depot to build, did not McConnel expressly tell you that the building of the depot should have nothing to do with it?

Answer: He never made any such conversation at the time. When he came down with the contract for me to sign, he said several times, he did not care whether I gave up the bond or not; that made no odds to him. There was no such conversation at the time the agreement was made; but I considered the giving up the bond as a consideration for giving me the depot to build.

Question 9, by Mr. McConnel: Was the price agreed upon that you should have for building the depot; if so, what part of the consideration did the giving up of this bond, form; or, were you to have any more for the building, in consequence of the giving up of this bond?

Answer: I have stated already the conversation. I was to give up the bond—I was to have the engineers' estimates for building the depot—I was to have the same as January and Dunlap. There was no sum stated. I considered I was going to make money by getting the depot to build. I supposed it was all legal, because he showed me the law. I was to have no extra pay for building it, in

consequence of giving up the bond. The only advantage I was to get, was the preference of the job.

Question 10, by Mr. McConnel: Did you you write a letter to me in relation to said depot; and did I write to you? If so, where are those letters I wrote to you?

Answer: I wrote to him. He wrote to me. The letter is probably here, in possession of Mr. Brockenbrough.

(The following letter was shown to him, and identified as the same.)

"JACKSONVILLE, *November* 13, 1838.

"DEAR SIR: Yours of the 10th is before me. As to my seeming to be off, about the contract over the river, you are *or were* very much mistaken. But I this day received a letter from the engineer over the river, saying that he had heard such a thing was in contemplation, and he advised against it this season, as he says it will not be needed. And now as you seem to be inclined to be off, I believe I will take his advice, and we can talk it over in the spring, if I should happen to be Commissioner, which I dont care one *damn* about.

As to the bond to the Witham lot you mention, I am not *now* the owner of it. The same belongs to Jas. A. Collins, of Pike county, as administrator of Witham, and the only claim I have to it is, that I am his agent, and the estate owes me probably more than it will ever pay; so you see I can't make the assignment you request. And again, friend Daniel, if I could, I would *not* upon the terms you mention; I am only willing to cancel claims and be even all round. And really I would rather have the money James E. and D. Waldo owe me, on account, than do that; as I know mighty well *what can* and *what can't* be done. As to the exposing of private letters, God knows I have no advantage of certain of my friends in that. But we will not disagree about that. Tell James to give Brock. another false certificate, if he likes it. I think I will be at Meredosia before I go to Vandalia, and see you. You may rely upon my aid at Vandalia if you need it.

M. McCONNEL."

DAN'L WALDO, Esq.

Question 11, by McConnel: Have you not stated to persons, since you have been in this town, that if McConnel would decline, and not be a candidate for the office of Commissioner, those charges would be withdrawn, and that would be the best way to settle this whole matter any how?

Answer: I said I presumed the whole would be settled if he was not a candidate. I had no authority for saying so.

Question 12, by Mr. Hardin: State what part of the town of Meredosia the railroad, as first located, passed through—was that considered a permanent location, and staked off; and did the road, as first located, run through any part of the property purchased of Gov. Duncan? And when was the location changed; and did Mr. McConnel say that the location was changed by his direction or consent?

Answer: It passed through Cobb and Aylesworth's addition on Washington street. It was staked off, by side and grade stakes—staked out by Mr. Pollock. It ran on the street; and from section one, the side stakes were not set round to the lake. Some of the lots, purchased of Gov. Duncan, lay on Washington street. The location was changed last summer; it might be in June, previous to the letting on the other side of the river, which I think was in July. McConnel said it was not changed by his direction or consent.

[The last answer was given, on inspection of the map exhibited to the committee, and sworn to by Mr. Brockenbrough.]

Question 13, by Mr. Browning: Did the contractors ever commence work on the road, as it was first located through the property purchased of Duncan, and receive estimates, and pay upon such work?

Answer: They grubbed off as it was first located. I do not know whether they received pay.

Question 14, by Mr. McConnel: You say this contract was never made. Will you now state whether, at any time while this contract was in contemplation, it was agreed between us, that the giving up of that bond should not make any part of the condition in said contract about the depot? State what was said about it.

Answer: We did make a verbal contract. He made it in writing, but we never signed it. When he came down, and brought the written contract, I then told him I did not know that I could get the bond; I would if I could. He said, "I dont care a cent about that; it is nothing to me one way or the other;" told me to come up to Jacksonville, and bring the bond if I could get it; but whether I got the bond or not, he would give me the contract any how. This was the second conversation—the second time he came down to Meredosia, when he brought down the written contract to be copied. I copied them, and made some little alteration, and took them to Jacksonville, to see if McConnel would sign them. I gave the copy to him. He said he would take it and examine it, when he had time; he had not time then. I asked him once or twice, if he had examined it; he said he had not; had not had time. The contract never was executed.

James E. Waldo again examined.

Question by Mr. McConnel: Have you and your brother disposed of or exchanged any of the property bought of Gov. Duncan in Meredosia; if so, what was the date of the transaction; and was McConnel consulted with upon the subject, or was he informed of it?

Answer: We did accept of the following arrangement with Duncan: [Here a bond was produced, and identified as the same by the witness, a copy of which follows:]

"JACKSONVILLE, *August* 27, 1838.

"Whereas I agreed, by bond, dated 31st March, 1837, to convey to D. and J. E. Waldo, four-fifths of all my right and title to lot No. five, in block No. seven, in Cobb and Aylesworth's addition to the town of Meredosia, Illinois, on condition of the said Waldos complying with the conditions of said bond; and whereas, to compromise with Samuel Wiggins respecting the title to said lot, I agreed to take lots five and eight in block eight, and to relinquish all claim to lot five in block seven. Now, therefore, I hereby agree with said Waldos, to substitute four-fifths of lots five and eight in block eight, in the lieu of lot five in block seven, they hereby agreeing to receive the two former, instead of the latter lot.

JOSEPH DUNCAN. [SEAL]
JAMES E. WALDO. [SEAL]
DANIEL WALDO. [SEAL]

"Attest: E. T. GOUDY."

Answer continued: Duncan and Wiggins having previously compromised it. The date is the same. McConnel was not consulted or advised with about it.

Daniel Waldo was discharged from further attendance as a witness.

The committee determined that they would not proceed to investigate the second specification of the first charge.

And then the committee adjourned until the next evening.

TUESDAY, JANUARY 29, 1839, 7 P. M.

The committee met pursuant to adjournment.

Present, Messrs. Gatewood, Hacker, and Browning, of the Senate; Messrs. Calhoun, Naper, Hardin, and Robinson, of the House of Representatives.

L. E. H. Houghton was sworn as a witness to the first specification of the first charge.

Question 1: State what you know of the contract between the Waldos and Mr. McConnel, for property in Meredosia.

Answer: I know nothing of such a contract, except what I have heard others say.

I heard James E. Waldo and McConnel in conversation, at the July term of court, in 1838. They were in his office—talked of the location of the depot at Meredosia. McConnel expressed dissatisfaction at the present location of the depot. I understood McConnel to be dissatisfied, and that it was contrary to his expectations the depot was located at the time it was located. He observed, "it would not take much to take it further up the river, with the same curve. There had been some surveying done, that would justify the location further up, so that the road would strike at or near the point of the island." I know nothing of two locations—the maps or the streets of Meredosia. McConnel expressed dissatisfaction with the location, as it then was, and now is, and wanted it moved further up the river.

Question 2: Do you know any thing of any other location, prior to the one they were talking about?

Answer: I do not.

Question 3: Were they conversing about any change of location, from any other or former one in Meredosia?

Answer: I think Mr. Waldo said it ought to go into town by some other place which he named; and the depot ought to be placed where it had been intended. I do not recollect that Mr. McConnel gave any answer, relating to any former location of the depot. The location, which Waldo said ought to have been made, was in the direction further up the river, as spoken of before.

Question 4, by Mr. Browning: Was there any conversation between McConnel and Waldo about property they owned in Meredosia?

Answer: I do not recollect of any. Their conversation was commenced low; the first part I did not notice sufficiently to recollect any thing about it.

Question 5, by Mr. Browning: Did Mr. McConnel state why the location of the road and depot had been changed; and did he express a wish to have it moved further up the river?

Answer: I do not recollect that he gave any reason for the change. I understood that Mr. Bucklin, whom he sent down, located the depot at a time he did not expect it. As I said before, he observed it would not take much to move it up the river. The road has not been changed since that conversation. I did not understand McConnel to admit any former location of the depot; do not recollect that he did.

S. C. Fogus sworn as a witness to the first additional specification to the first charge.

Question 1: State all you know relative to this charge: [The charge being first read to him.]

Answer: I sold McConnel a lot of ground for four hundred and twenty dollars. The contract was made on Saturday, the bond executed on Monday, as I think. The 12th June, 1837, was the date of the bond. The lot joins the lot on which the railroad office now stands—joins it on the south, and lies parallel to it. The railroad was not then permanently located; it was not publicly made known, at least that I know of. If I had known it, I should not have sold the lot as I did. The lot is worth more now than then—I do not know how much. I offered since to take it back from Stevenson for the same money, and Stevenson would not give it up. If I owned it now, I should value it at least as much more as I got for it. The lot does not lie on the line of the railroad. I do not know whether

the railroad touches the office lot which joins the lot sold. The lot sold to McConnel is lot No. seven, in Duncan's north addition to the town of Jacksonville. The rise of property is owing to the railroad; it increases the value of property along the line of the railroad. The lot sold to McConnel is, as near as I can reckon, more than one hundred feet from the railroad, as located. I have no certain knowledge of the distance. The railroad office is between, and some other distance between, I do not know how much. McConnel owned the lot south of the lot sold at the time it was sold. It was bought by McConnel sometime in March, 1837, as I think, of Mr. Stevenson; I was told so by Stevenson.

S. C. Fogus was discharged from further attendance as a witness.

James McKinney was sworn as a witness to the first specification of the first charge.

Question 1: State what you know respecting this charge; [the charge being first read to him.]

Answer: I have no personal knowledge of any purchase in Meredosia, by McConnel.

Question 2: Has not Mr. McConnel frequently conversed with you respecting the original location of the railroad in Meredosia; and, when the present location was spoken of, did he not tell you that such a change would be without his approbation or authority, or words to that effect?

Answer: I heard McConnel say he had no knowledge of the present location being made, at the time it was made. He said he thought the location of the depot would be opposite the point of the island, or near there, probably a little above; that the present location was made without his knowledge or authority, or words to that effect.

Question 3, by Mr, Browning: Did Mr. McConnel express himself dissatisfied with the location, as it now is?

Answer: I thought he did; that was my impression at the time.

Question 4, by Mr. Browning: Did you ever have any conversation with Mr. McConnel about property he and the Waldos owned in Meredosia?

Answer: Not that I recollect of.

Question 5, by Mr. Browning: Did Mr. McConnel express a wish that the termination of the road should be opposite the point of the island, or near there?

Answer: I did not understand him to *wish* the depot to be located there.

Question 6, by Mr. Browning: Why was McConnel dissatisfied with the location, as now made?

Answer: He objected to the present location, because the landing was not as good as that at the point of the island. He did express himself dissatisfied with the present location.

Question 7, by Mr. Hardin: Do you know whether the railroad was ever located in Meredosia, so as to strike the river opposite the island; and did you ever hear McConnel say that it had been or would be so located?

Answer: I have no personal knowledge that the railroad was ever so located, as to strike the river opposite the point of the island. I have no recollection that I ever heard McConnel say it had been or would be located there.

Question 8: Did you ever hear Mr. McConnel say that the location of the road, as it was first said to have been made in Meredosia, should not be changed; or did you ever hear him say any thing on that subject? If so, state it.

Answer: I never heard him say any thing more than I have stated already, as far as I recollect.

Question 9, by Mr. Browning: Had you any conversation with Mr. McConnel, at the last March term of the court in Jacksonville, about a change in the location of the road? If so, state what it was.

Answer: I have no recollection of having any conversation with him about it, at that particular time.

Question 10, by Mr. Browning: Did you ever hear a conversation between Mr. McConnel and James E. Waldo, in relation to the location of the railroad at Meredosia? State, as nearly as you can recollect, what the conversation was.

Answer: I think I heard them have a conversation about it at the Recorder's office. I cannot exactly say what it was; but it seems to me it was about the amount of what I have already stated. The conversation was nearly the same as that which I had with McConnel. Waldo seemed to be anxious that the depot should be opposite the point of the island. I could not undertake to state the conversation, for I do not recollect it precisely.

Question 11, by Mr. Gatewood: What is the substance of your deposition, as taken by Mr. McConnel? State if it is in substance the same as you have now stated, and whether there were other points in the same examined into.

Answer: One question in the deposition was, whether I knew of his (McConnel's) owning any property in Meredosia. I am the Recorder of the county. I examined the records, and answered, that I could not find that he had at any time owned any property in Meredosia. Nothing, that I have been examined on to-night, has any reference to what is in the deposition, except what relates to his owning property in Meredosia, as well as I recollect.

An abstract of vouchers, filed in the office of the Fund Commissioners by E. J. Willard, was received.

And the committee adjourned until to-morrow evening, at 7 P. M.

WEDNESDAY, JANUARY 30, 1839, 7 P. M.

The committee met pursuant to adjournment.

Present: Messrs. Gatewood, Hacker, Browning, and Richardson, of the Senate; Messrs. Hardin, Roman, Robinson, Naper, and Thornton, of the House of Representatives.

Joseph C. Thompson was sworn as a witness to the first specification of the first charge; which was read to him.

Question 1: Were side stakes driven along said railroad route, through Cobb and Aylsworth's addition; and was any work done by the contractors on said road, through said addition?

Answer: There was work done in Cobb and Aylsworth's addition. There were stakes set—side and centre stakes. I was not there when the road was located. There were some bushes cut, &c. I don't know whether McConnel gave any directions about it. I dont know any thing of any contract between McConnel and the Waldos, relative to property in Meredosia—never heard McConnel say any thing about it.

Question 2, by Mr Hardin: If the road had been permanently located, so as to terminate in the part of the town of Meredosia opposite the island, would it have increased the value of the property bought by the Waldos of Duncan, in Cobb and Aylsworth's addition, more than the present location? Do you live in Meredosia?

Answer: I can only say as a matter of opinion. I should judge that it would. I live at Meredosia.

Question 3, by Mr. McConnel: Is not the railroad now finished at Meredosia?

Answer: It is finished, so that the locomotive runs.

Question 4, by Mr. McConnel: Does the railroad line, as it is now finished, run on any part of Cobb and Aylsworth's addition?

Answer: I cannot say that it does or does not. I am inclined to think that it does not.

Question 5: Did you ever hear McConnel say any thing of the change of the location of the railroad?

Answer: I think I have heard him say that he never gave any orders to have it located where it now is. I cannot say where or when I heard him say it.

Question 6, by Mr. Hardin: Do you know whether James E. Waldo was in Meredosia on the 5th day of January, 1837; or do you know any facts, which lead you to that belief? If so, state them.

Answer: From entries in his day book, which bear that date, in his hand-writing, I believe that he was there on that day. I know his hand-writing and his day book.

Question 7, by Mr. McConnel: You say you live in Meredosia. Have you ever known McConnel to exercise any rights of ownership over the property bought by the Waldos of Gov. Duncan, in Meredosia?

Answer: I never have.

William French was sworn as a witness to the additional specification to the second charge; which was read; and also to the first additional specification to the first charge.

Question 1, by Mr. Gatewood: Is the railroad from Jacksonville to Meredosia located on the most direct and eligible route?

Answer: I do not think it is; that is simply my opinion.

Question 2, by Mr. Thornton: Are you an engineer.

Answer: I am not.

Question 3, by Mr. Thornton: Do you think yourself competent to judge of the eligibility of a railroad, in reference to grades, practicability of construction, and other considerations relative to the construction of railroads?

Answer: I do not.

Question 4, by Mr. Thornton: Do you possess any knowledge of any derelict-ion of duty, on the part of McConnel, in the location of the said railroad?

Answer: I do not.

Question 5: Do you know, of your own knowledge, any act of McConnel's in violation of the twenty-seventh and thirty-third sections of the internal improvement act?

Answer: I do not know of any such act of McConnel's, or of any motive he had in the location. I suppose the taking the road south from Meredosia, in front of Naples, and up the valley of Wolf run, when there was a nearer and more practicable route, would be a violation of the thirty-third section.

Question 6: State what you heard Mr. McConnel say, about the 13th August, 1838, relative to the location of the Northern Cross railroad, between Jacksonville and Meredosia, through the valley of Wolf run.

Answer: In passing from Meredosia to Jacksonville, in company with McConnel, January, and Dunlap, I think on the 13th August, 1838, in speaking about the location of the railroad from Jacksonville to Meredosia, McConnel said he could not have made the railroad any where else than he did, in the valley of Wolf run; that, if he had attempted to make it in any other place, the Jacksonville and Naples Railroad Company would have enjoined his work; also, that it was the understanding that the road was to be made there; and that they were to have a lateral branch to Naples, in consideration that the Jacksonville and Naples Railroad Company should not enjoin him.

Question 7: Did Mr. McConnel state that such was the understanding from the commencement?

Answer: I don't recollect precisely, but I think he made use of those words; though I have not a very distinct recollection.

Question 8: What did you understand by the words "from the commencement?"

Answer: From the commencement of the public works.

Question 9: Is there any land laid off, under the name of Morgan city, through

which the present location of the railroad, from Jacksonville to Meredosia, passes?

Answer: There is.

Question 10: Do you know, certainly, that McConnel owns any interest in those lands; or did he own any at the time of the location of the route?

Answer: I do not.

Question 11: Did you ever hear Mr. McConnel refuse an offer of $7,000 for his interest in Morgan city and lands, in and about Wolf run; and, if so, when and where such offer was made?

Answer: I did. The offer was made by Mr. Collins, I think about the 1st March, 1837, in the branch of the State Bank of Illinois at Jacksonville. Wm. B. Warren and T. O. Duncan, cashier of the bank, were present. Mr. Collins offered Mr. McConnel $7,000 for his interest in Morgan city and lands that lie in the vicinity of Morgan city, known by the name of the Morgan city tract of land. I think I heard Mr. McConnel say he owned one-fourth of the tract of land

Question 12: Did Mr. McConnel accept or refuse the offer of Collins?

Answer: He refused to take the $7,000.

Question 13: Do you know, certainly, what distance the said railroad traverses the said tract of land?

Answer: I think it passes through the tract, said to belong to the Morgan city tract, about two miles and a half. It may be more, or a little less.

Question 14: Can you state, positively, when McConnel acquired any interest in said tract of land?

Answer: I cannot.

Question 15: Do you not know that that interest must have been acquired prior to the passage of the act of 27th February, 1837?

Answer: I presume it was, if he owned it at all. I do not know, certainly, that he owned any part of it.

Question 16, by Mr. Browning: Would the railroad from Jacksonville to Meredosia have passed through Morgan city, and the tract of land known as the Morgan city tract, if said road had been located upon what you believe to be the nearest and most eligible route?

Answer: It would have passed through it, about three quarters of a mile—would not have passed through Morgan city, but through the Morgan city tract of land.

Question 17, by Mr. Browning: When was Morgan city laid out?

Answer: Part of it was laid out in March, part in April, and part in August, in 1837, as well as I recollect.

Question 18, by Mr. Browning: Are you a surveyor, and are you well acquainted with the country over which said road passes?

Answer: I am a surveyor, and am well acquainted with the country over which said road passes.

Question 19, by Mr. McConnel: State whether your recollection of the conversation with January and Dunlap is clear, and whether you may not be mistaken.

Answer: I do not think I am mistaken; I am satisfied I am not; I have a distinct recollection of it.

Question 20, by Mr. McConnel: Were any other persons present at this conversation, except January, Dunlap, and McConnel? If any, state who were present; state where the conversation took place, and what led to the conversation.

Answer: No other persons were present. We were all together in a buggy wagon on the bluffs of the Illinois river, near Davis' branch, travelling on the road. As well as I recollect, I pointed to Davis' branch, and told McConnel he ought to have taken the railroad there, instead of up Wolf run. I believe that gave rise to the conversation.

Question 21, by Mr. McConnel: What have you heard Mr. Brockenbrough say was his object in prosecuting McConnel? And did he say any thing about who was engaged with him in making those charges, and whether he paid his own expenses?

Answer: I have heard him say he wanted him out of office; that he was not fit for it, and was a dangerous man to fill the office. I have heard him speak frequently about to that amount. I have heard him repeatedly say there was no person engaged in it but himself; that he had no person to take an active part, and that he was alone. I heard him say that he paid his own expenses.

Question 22, by Mr. McConnel: Have not you and others, to your knowledge, been engaged in forwarding those charges, and getting up this prosecution?

Answer: I have not—I know of no other person than Mr. Brockenbrough.

Question 23: Had you not given Mr. Brockenbrough previous information of all the evidence you have given this committee?

Answer: I gave it to him about two weeks ago, I think in Jacksonville, upon application by him. The information I gave him was about the road passing through the Morgan city tract of land, the conversation with McConnel, in presence of January and Dunlap, and the conversation in the bank.

Question 24, by Mr. McConnel? Have you not been engaged, for several months past, with other persons in Morgan county, in prosecuting and getting up charges against McConnel? State, sir, all you know about this matter; and are you not interested in having the locations of the road different from what they now are?

Answer: So far as respects getting up charges, I know nothing about it. I have done no such thing, and know of no other person so engaged, except Brockenbrough. I own some property adjoining Meredosia on the south, which, if the road had been taken east, up Davis' branch, and no branch made at Naples, would have been worth more.

Question 25, by Mr. Browning: Was the road located before you acquired that property?

Answer: I purchased the property about the first week in April, 1837; I think the road was not then located,

Question 26, by Mr. McConnel: What is Mr. Brockenbrough's business; and has he not been engaged in land speculations for some years past? Whether he was not, or has been, the owner of land in the upper end of Meredosia, and lands adjoining the upper end of said town? And have you not heard Brockenbrough say that he was anxious that the road should be located down Coon run?

Answer: Brockenbrough has been engaged in buying and selling lands. He owned property in the upper end of Meredosia, and lands about two miles north, on the Meredosia lake; and one tract of land east, as well as I recollect. I recollect hearing him say he believed the road would be located either up Coon run or Davis' branch; he rather thought Coon run.

Question 27, by Mr. McConnel: Do you not know from Brockenbrough, that his interest has been affected in the location of the road? And what have you heard him say upon that subject? And whether that is not the cause of his prosecuting McConnel?

Answer: I have heard him say his interest was injured by the location of the railroad in front of Naples, south of Meredosia, and up Wolf run; and by the lateral branch to Naples. And I have heard him say he expected to gain nothing by the prosecution, except in common with every body else. I never heard him say that the injury to his property was the cause of the prosecution.

Question 28, by Mr. McConnel: Are not the Waldos owners of land in the upper end of Meredosia; and have they not been engaged in speculating in lands in that part of Meredosia; and are they not deeply interested in procuring the road to be changed to Coon run, and to the upper end of town?

Answer: I believe they own property there, and have been speculating. I should say they were interested in procuring that change.

Question 29, by Mr. McConnel: Are you not a surveyor, and do you not reside in Morgan county; and have you not made a connected plat of Meredosia; and are you not acquainted with the owners of land in Meredosia, and the location of the railroad there, as now completed; and do you know of any property, that is owned by McConnel, on the line of the railroad in Meredosia?

I am a surveyor, and live in Jacksonville, in Morgan county. I have made a connected plat of Meredosia. I am acquainted with the location of the railroad in Meredosia. I know a good many of the owners of the property in said town. I know of no property, on the line of the railroad there, owned by McConnel.

Question 30, by Mr. Browning: State whether you know of any exertion now being made by the Messrs. Waldos, or others, to procure a change in the present location of the railroad at Meredosia?

Answer: I do not.

Question 31: Do you believe that any such exertion is now making by said Waldos, or by any one else?

Answer: I do not.

Question 32, by Mr. Hardin: State whether you know the land condemned for railroad purposes, in Jacksonville? And is the land described in the assessment, made by Metcalf, Henry, and Fooshee, for one thousand dollars, on Joseph Duncan's land; that on which the railroad office, and engine house or stable, are built? And does the railroad lot, so condemned, adjoin lot No. seven, in Duncan's north addition to Jacksonville?

Answer: I know the land condemned for railroad purposes, in Jacksonville. I believe the engine house, or stable, and railroad office, are built upon the land condemned and described in the assessment made by Metcalf, Henry, and Fooshee, for one thousand dollars on Joseph Duncan's land. From the inspection of the map of the town of Jacksonville, here shown to me, I believe the land condemned does join lot No. seven in Duncan's north addition to the town of Jacksonville.*

Question 33, by Mr. McConnel: Do you know any thing about the fact, of your own knowledge, whether the condemned land, spoken of, joins lot No. seven in Duncan's north addition to Jacksonville?

Answer: I do not.

Joseph C. Thompson and William French were discharged from further attendance as witnesses.

A. Brockenbrough, having been formerly sworn on a verbal examination before the committee, was interrogated.

Question 1, by Mr. Thornton: From what source did you derive the information contained in the additional specification to the second charge?

Answer: From Mr. French.

And then the committee adjourned until to-morrow, at 2 o'clock. P. M.

THURSDAY, January 31, 1839, 2 P. M.

The committee met pursuant to adjournment.

Present: Messrs. Browning, Gatewood, Richardson, and Hacker, of the Senate; Messrs. Calhoun, Thornton, Hardin, French, Roman, Naper, and Robinson, of the House of Representatives.

On motion of Mr. Hardin,

The ninth rule was repealed.

* The map mentioned in answer No. 32, was a map of Jacksonville, produced to the committee, and sworn to by A. Brockenbrough.

James Harvey Finch was sworn as a witness to the third additional specification to the fourth charge, which was read.

He was directed to state all he knew respecting the charge, and gave the following:

Answer: I do not know any thing of the purchase of the boat by McConnel. I know nothing of his paying for it. I don't recollect hearing McConnel say any thing about it. I saw the boat, and the condition of it, in August, September, and October, 1838. In August, I think, I saw the boat running as a ferry-boat across the river at Naples. In September, I saw it once or twice lying sunk near the shore, just above the ferry landing at Naples. I dont know that that is the same boat spoken of in the charge, of my own knowledge. I understood the boat which I saw belonged to Mr. Collins, when it was first sent there.

Question 1: Was the boat generally reputed and understood to be the property of Charles Collins?

Answer: It was.

Question 2: Did those, who had charge of the boat at Naples, acknowledge the boat as Collins' property?

Answer: Mr. McCourtney, who had charge of the boat, told me that Collins sent it there; that he (McCourtney) did not own it, but only rented it, and rented the ferry.

Question 3, by Mr. Browning: Was there any other steam ferry-boat about Naples, to your knowledge, than the one of which you speak?

Answer: There was not.

Question 4, by Mr. Hardin: State what was the value and description of the boat you speak of.

Answer: I cannot speak as to the value of the engine. The boat itself, as I should judge, was worth from $150 to $200. It was a common, single-hull boat, about two feet deep from the deck to the bottom of the hull; when a team was on board, was not much out of water; a four horse team and wagon could not stand lengthwise across the boat.

It was agreed by the committee, that written interrogatories should be prepared and sent to James M. Bucklin, tendering the charges and specifications he was called to prove; and that he should be requested to reduce his answers to writing, and appear with them at the next meeting of the committee; to be sworn as to their truth, and cross-examined, if desired.

Mr. McConnel consented to this order.

And then the committee adjourned until Saturday, the 2d February, 1839, at 7 P. M.

SATURDAY, February 2, 1839, 7 P. M.

The committe met pursuant to adjournment.

Present: Messrs. Gatewood, Hacker, Browning, and Richardson, of the Senate; Messrs. Roman, Naper, Hardin, and Calhoun of the House of Representatives.

Williamson Gatewood was sworn as a witness to the third additional specification to the fourth charge.

Question 1: State what you know about the purchase of a steamboat by Mr. McConnel.

Answer: I can only state what appears from his accounts. He filed in the office of the Fund Commissioners, on the 1st October, 1838, a voucher dated 12th September, 1838, "to Charles Collins, for a small steamboat, to survey the Illinois river, $2,500;" which voucher was signed by Charles Collins. It was withdrawn 18th December, 1838.

Question 2: State if on the 1st October, when the settlement was made, Mr. McConnel was allowed credit for the $2,500, for the steamboat.

Answer: He was. On the 7th December, 1838, he filed another account, with $2,500 stated at the foot of the account as a credit to the sum. I entered the credit, with a deduction of the $2,500, on the the 7th December. After reflecting on it a day or two, I saw Mr. McConnel, and told him I thought it was an improper way of disposing of the $2,500; that I thonght the better way would be, to withdraw the voucher, and charge him with the amount in his account, which he readily consented to do; at the same time, or about that time, he observed that the contract never had been confirmed about the steamboat, as the parties never had complied with their contract, in doing work about the boat, repairs or improvements of some kind. He said the money had been deposited in bank, but was not in their possession. McConnel generally made his accounts up monthly, or so returned them; sometimes two or three months' accounts together. The account, where the steamboat was charged, was returned to the 1st October; the next was returned 7th December. The credit did not reach me till the 7th December, but was included in the account for November, as I think. It was included, at any rate, in the next account he returned, after the charge was made, and I adjusted it as before stated.

Question 3: Was the voucher a receipt from Collins?

Answer: It certainly was a receipt from him, for money paid, so expressed, or else I should not have received it as a voucher.

Question 4, by Mr. McConnel: In the final settlement, was McConnel allowed a credid for the boat?

Answer: He has no credit now on the books, for that boat or any other; his account now stands, as to amount, as if no such voucher had been presented.

Question 5: Are the items as you mentioned them, in the order of time as they occurred, shown on your books?

Answer: They are.

Question 6: Did you act under the authority of the Board of Fund Commissioners, in allowing the credit of $2,500, on the 1st October, 1838?

Answer: I did.

Question 7: Did you also act under the authority of the Board, when you returned the voucher?

Answer: I did.

Moses M. Rawlings was sworn as a witness to the same charge.

Question 1: Were you present in Vandalia on the 7th December last?

Answer: I was here at the commencement of the session.

Question 2: Do you know any thing of the withdrawal of the voucher, spoken of by the last witness?

Answer: Not that I now recollect of; I know it only, as Mr. Gatewood mentioned the circumstance, and I saw it recorded in the books.

Question 3: Did you approve of the mode in which it was disposed of?

Answer: I did. I was satisfied it was correctly settled, from the statements of Mr. Gatewood, and the history he gave me of it.

Charles Oakley was sworn as a witness to the same charge. The same questions were asked of him as of the last witness. He gave the following:

Answer: I can only state, as General Rawlings has stated, that it seemed all to be correctly done. We had given Mr. Gatewood full power to receive or reject vouchers in our absence.

Messrs. Gatewood, Rawlings, and Oakley, were discharged from further attendance, as witnesses.

On motion of Mr. Hardin,

It was agreed by the committee, that written interrogatories should be pre-

pared and submitted to Wm. Pollock and other witnesses, not yet examined, in the same manner as interrogatories had been submitted to James M. Bucklin; to be answered in like manner in writing, to be sworn to before the committee, and cross-examined upon, if desired; and that Mr. McConnel should have the liberty to take the testimony of witnesses in like manner, to be sworn to and cross-examined upon by the committee in the same way.

James M. Bucklin was allowed further time, until Monday next, to complete his answers.

James Harvey Finch was again examined as to the third additional specification to the fourth charge; and also as to the second charge and the additional specification to the second charge. Being directed to state whatever he knew, relative to the steamboat, not already given in evidence, he answered:

I was at Naples sometime in October—the boat was lying at pretty much the same place.

Question 1, by Mr. Hardin: State what was the condition of the Illinois river, in August, 1838, and for several months before and thereafter.

Answer: The river was very low, in August, September, and October. Small boats had run up as far as Beardstown bar, which is about twenty-three miles above Naples. Boats of the size of that could run up to Beardstown. Boats of that size, after passing Beardstown bar, which is below Beardstown, as I understand about the river, might go up to Peoria. I am not acquainted with the river, of my own knowledge, above Beardstown. I have heard steamboat captains and pilots say the Beardstown bar was the worst bar on the river. The river was unusually low late in the season and fall—did not get low till the latter part of the summer and fall. It was full during March, April, and May.

Question 2, by Mr. Richardson: What was the condition of the engine of said boat, about August, September, and October?

Do you know whether Mr. McConnel owns any property in Naples, and is a partner of the house of McConnel, Ormsbee & Co.?

Answer, (to first branch): I could not say positively. The boat was running across the river before it was sunk. I don't know much about engines. The engine was a small one; the fly-wheel I should judge was about eight or ten feet in diameter.

(To second branch): I knew nothing, only from business I have done with him, and what I have heard him say. I have heard him say, at two different times, that he owned property in Naples—that he owned part of the house and lot where they do business. The house of McConnel, Ormsbee & Co., bought a note on me, which McConnel presented to me, and I paid to him.

Mr. McConnel here admitted to the committee that he did own part of the house and lot, and was a partner of the house of McConnel, Ormsbee & Co.; and said he could not see what that had to do with the business.

Question 3: Have you any idea of the value of said property?

Answer: Very little, sir. I have lived at Naples, and have lived at Meredosia, for six years or upwards. I now live at Meredosia. I suppose front lots, such as that I have spoken of, are worth from $1,000 to $2,000.

Question 4: Do you know of McConnel's owning any property in and about Naples, except that you have named?

Answer: I do not.

Question 5: Was the boat of such a description, in your opinion, as to be suitable in any way to aid in improving the navigation of the Illinois river?

Answer: The boat could run up and down the river in August; I think, sir, it came up to Meredosia.

Question 6: Was it suitable for removing bars, or dredging, or removing snags?

Answer: If snags or sand were put upon it, it could carry off a small quantity. I should not think it could do much towards pulling up snags or scraping.

Question 7: Do you know the value of unimproved land between the outlet of lake Dickinson and Naples?

Answer: Not exactly, sir. I should judge it was worth from $6 to $10 an acre.

Question 8: If the railroad had run from Lake Dickinson to Naples, would it have benefitted the land as much as it injured it?

Answer: I think it would.

Question 9, by Mr. McConnel: Are you an engineer?

Answer: I am not.

Question 10, by Mr. McConnel: Have you ever been engaged in clearing out a river?

Answer: I have not.

Question 11, by Mr. McConnel: Are you a judge of steamboats and their value—of steam engines, and their value?

Answer: Nothing more only from the information of others; from what I have heard men say they paid for boats and engines.

Question 12: What is the power of the engine on this boat spoken of?

Answer: I don't know the power of it.

Question 13: Would not the railroad have injured the land between lake Dickinson and Naples by running over it, as much as any other good land similarly situated?

Answer: Yes, any other land of the same quality, I should think?

Question 14: Would not the railroad be of as much benefit to land about Jacksonville as to the land between lake Dickinson and Naples?

Answer: It would depend on the way the railroad runs through the land. If it does not cut the farm in two, it would be of the same benefit as between lake Dickinson and Naples. That is my opinion.

Question 15: Are there any improved farms between the outlet of lake Dickinson and Naples?

Answer: I don't know positively whether there are or not. My opinion is that there are not.

Question 16: Did you ever follow either of the experimental lines for the lateral road between the Northern Cross railroad and Naples?

Answer: I followed the one now located on. I never did follow the other.

Question 17: Are you not well acquainted with the land over which the other experimental line runs; and have you not frequently gone over the ground?

Answer: Yes; I am well acquainted with it, and have been over the ground.

James Harvey Finch was discharged from further attendance as a witness.

Andrew Johnson resigned his situation as Clerk to the committee; and Mr. O. L. Beach was appointed in his place.

Communications from James Oakey and Egbert Dewey, relative to A. R. Parker, acting as principal engineer of that portion of the Northern Cross railroad west of the Illinois river.

A communication was received from Edson Harkness, relative to Joel Wright, Murray McConnel, and J. W. Ingersoll; and a note from

J. E. Waldo, desiring Wm. B. Warren to be subpœnaed as a witness.

And then the committee adjourned until Monday, the 4th February, at 7 P. M.

MONDAY, February 4, 1839, 7 o'clock, P. M.

The committee met pursuant to adjournment.

Present: Messrs. Hacker and Browning, of the Senate; Mr. Roman, of the House.

Not a quorum present, the committee adjourned till to-morrow at 6½ o'clock, P. M.

WEDNESDAY, February 6, 1839, 7 o'clock.

The committee met pursuant to adjournment.

Present: Messrs. Gatewood, Hacker, and Browning, of the Senate; and Messrs. Hardin and Roman, of the House.

Mr. James M. Bucklin submitted, in writing, the following answers to interrogatories proposed to him by the committee.

Question 1: How far is Naples from Meredosia?

Answer: About six miles.

Question 2: Would the Northern Cross railroad from Jacksonville to Meredosia on a straight line, at any point, be nearer than five miles to Naples?

Answer: No.

Question 3: Does that curve in the railroad by which it is brought within five miles of Naples pass over any land owned by McConnel?

Answer. Not to my knowledge.

Question 4: State all the circumstances you know relative to the present location, and by whom it was ordered, and whether there is a difference in the cost between any other route not within five miles of Naples and the one now located.

Question 8: Will you examine the map of Meredosia and state what street or course the Northern Cross railroad passed through said town, as originally located and placed under contract, and whether the original termination was made in Meredosia? State dates and circumstances minutely.

Question 9: Did the contractors ever receive an estimate and pay for work done on said road through Meredosia, as the same was originally located and placed under contract?

Question 10: When was the Northern Cross railroad permanently located through Jacksonville and Meredosia, as the same was placed under contract; and when was such location publicly made known?

Answer to interrogatories 4, 8, 9, and 10:

On my arrival in Jacksonville, May 1837, I received orders from M. McConnel to commence the location of the Northern Cross railroad between Jacksonville and Meredosia, on the Illinois river. Accordingly, having organized a corps of engineers on the 23d or 24th of May, I pro-

ceeded with them to Meredosia, accompanied by M. McConnel, who designated a point on an island in the Illinois river, above the ferry, as the best point for the termination of the road in that town, as it was the only landing for boats in low water. This point was therefore fixed upon as the termination of the road at the Illinois river. The first line ran from this point passed through an alley (running at right angles with the river) parallel to, and immediately north of, Main street, and was extended about 2,000 feet. A deflection was then made to the south, round the foot of the bluff on the east side of Dixon's lake, and carried so far south as the valley of Wolf run. Experimental lines were then run from different points in this line through the different passes in the bluffs to determine the best line through them; that is up Raccoon creek, Davis' branch, and Eagle run. The line up Raccoon run was extended to Jacksonville, and another brought from thence down the valley of Wolf run, joining the southern extremity of the first line run, and continued along the eastern margin of Dixon's lake, crossing it opposite the town of Meredosia, and terminating at some point on the line first run in the town.

These examinations were completed about the last of June, and, as the road was advertised to be put under contract by the 10th and 12th July, it then became necessary to commence the definitive location of the road. The original location of the second division of the Northern Cross railroad, between Jacksonville and Springfield, although included in my district, I had no control over, nor had I any knowledge of the country east of Jacksonville; consequently (any point in Jacksonville being accessible with the railroad from the west,) I was necessarily dependant for information from the gentleman to whom was confided the location of the second division, as to what part of the town it was advisable to commence the location of my division so as to suit the location of the road east of Jacksonville. By Mr. McConnel, I was informed that Mr. Chinn had ascertained that it was best to bring the line into town, from the east, on a centre or section line. Accordingly a point was selected in this line, in Main street (near the present location) and the definitive location commenced about the 4th of July; which fact was then, I believe, publicly known, although I did not report to Mr. McConnel, in writing, until the 10th of July. The general route determined upon to be definitively located, and proposed for contract, commenced at the above designated points in Jacksonville, passed through the valley of Wolf run, along the eastern side of Dixon's lake to the original point of commencement on the island above the ferry, in Meredosia. But the party engaged in revising this approximate line of location did not reach the valley of the Illinois river until about the 15th July. It was then thought advisable to examine the west side of Dixon's lake; a line was therefore commenced by Mr. Pollock, at the original terminus on the Illinois river, in Meredosia, and, by a curve to the south of 500 feet radius, carried into Washington street, on a tangent of about four miles in length, crossing the outlet of Dixon's lake and ascending into the valley of Wolf run. This line was so much more favorable than any on the east side of the lake that I adopted it as the permanent location, and it was staked out and cleared by the contractors in the fall of 1837; for which they

received an estimate in November, and, I presume, payment. During the winter the propriety of changing the termination further south was frequently discussed. Mr. McConnel seemed to approve of it; and, in the spring of 1838, the contractors, Messrs. January and Dunlap, came to me, and informed me that they wished to land some timber for superstructure at Meredosia, and wishing me to locate permanently the termination, which I refused to do, as Mr. McConnel had informed me that he would himself fix upon a point for the change of location. They then said that Mr. McConnel had referred them to me to designate the point, and I accordingly did so, about half a mile below the original terminus. At Jacksonville there was also a change of location in the spring, but not so material.

Question 5: What is the estimated cost of the Naples branch?

Answer: $36,543 on one route, and $18,294 on the other.

Question 6: Has McConnel any interest, and, if so, to what extent, on that side of Jacksonville where the railroad passed?

Answer: He has an interest in that part of the town, north, I should suppose about $10,000.

Question 7: Has Mr. McConnel any interest in Naples; if so, what is it—and how great, according to your judgment?

Answer: McConnel has an interest in a mercantile house in Naples, but I do not know that he owns any other property in that town.

Question 11: Did Mr. McConnel ever order you to cause surveys to be made with a view to the location and construction of a branch road from the Northern Cross railroad to the town of Naples?

Question 12: How did you receive said order?

Question 13: Were said surveys made in pursuance of said order?

Question 14: Is the present location of said branch, as under contract, in your opinion, more advantageous to the interests of the State than any other location which might have been procured?

Question 15: If a better location could have been selected, why was it not done?

Question 16: Did you not recommend a shorter and more economical location for said branch?

Question 17: State the difference in distance, cost, and other material facts respecting the difference in said locations?

Question 18: Did not M. McConnel endeavor to persuade you to recommend a location, (the one at present under contract,) contrary to your judgment and the interest of the State?

Question 19: Can you describe the ground over which the survey for the Naples branch was made?

Answers to questions 11, 12, 13, 14, 15, 16, 17, 18, and 19:

In answer to these interrogatories, I will refer the committee to Mr. McConnel's order to me, marked X; to my report to him on the subject of the Naples branch survey, marked A; to Mr. McConnel's reply, marked Z; to my rejoinder, marked B, and to his final instructions, marked Y. [For copy of correspondence see 46th page.]

The papers here referred to were read, and ordered to be copied.

Question 20: Was not the Naples branch placed under contract agreeable to your estimates for the same?

Answer: Yes.

Question 21: Did you recommend the location of the Northern Cross railroad to be made through the valley of Wolf run, in your report to Mr. McConnel about the 10th of July, 1837?

Answer: Yes.

Question 22: Were you informed by Mr. McConnel whether the Jacksonville and Naples Railroad Company had a claim to the right of way through the valley of Wolf run?

Answer: No.

Question 23: Had you been informed of the intention of said company to demand from the State the construction of a branch railroad to the town of Naples, as at present located, and under contract; and that said company would exact of the State pay for work already done on their old road, as indemnity for the right of way which said company claim through the valley of Wolf run, and now occupied by the Northern Cross railroad, is it probable you would have recommended the location of the Northern Cross railroad through the valley of Wolf run?

Answer: No.

Question 24: What will be the cost of said branch road to Naples, including the depot and other appendages erecting at Naples?

Answer: About $50,000.

Question 25: Does the lot of land condemned for the use of the State at Jacksonville, for the construction of the Northern Cross railroad and appendages thereon, join a lot sold by Mr. Fogus to Mr. McConnel; and is not the engineer's office now erected on the lot so condemned?

Answer: I believe the lot purchased of Mr. Fogus by Mr. McConnel adjoins the engineer's office; I am not certain. The office is erected on the lot condemned for the use of the road.

Question 26: Did you not survey said condemned lot, and was it not purchased for the construction of the Northern Cross railroad and appendages, by said McConnel?

Answer: Yes.

Question 27: If the road from Jacksonville to Mercdosia had been ordered to be located with a grade not exceeding fifty feet to the mile, could a nearer and as eligible a route have been selected as the present route down Wolf run? If so, state how much shorter it would have been than the present route, and what difference there would probably have been in the costs of construction of the two routes.

Answer: A route could have been selected about three miles nearer, and about $100,000 cheaper, but the road would not probably have been so effective as on the present route, with a grade of forty feet per mile.

Question 28: Are the railroad office and engine house in Jacksonville built on the lot condemned for railroad purposes in said town; and do you know whether said railroad lot adjoins lot number seven in Duncan's north addition to Jacksonville? Also state whether the railroad, as located in said town, passes through said railroad lot.

Answer: There is an engine office and stable or barn built for the State, on the lot condemned for railroad purposes. The railroad is also located through said lot between the stable and the office, but I do not know the number of the lot adjoining.

Question 29: Was not the ground thus assessed for the depot at Jacksonville marked out, or pointed out by Mr. McConnel, as necessary

for the said depot, so as to include the lot in Duncan's addition which joins the Fogus lot?

Answer: I assisted Mr. McConnel in measuring and marking out the lot of ground condemned for railroad purposes, and the office is included in it; but I do not know positively that it adjoins the Fogus lot.

After being duly sworn to the above, and the following, Mr. Bucklin was interrogated.

Question 30, by Mr. Hardin: State whether the affidavit of yourself, taken in the suit of the president and trustees of Jacksonville *vs.* M. McConnel, was made before the location of the Naples branch.

Answer: I do not recollect when the affidavit was made. The one presented to the committee is dated before the location was made.

Question 31, by Mr. Hardin: State whether the affidavit above referred to was originally written by yourself, or by Mr. McConnel; also state the reason why you were called on for said affidavit.

Answer: The affidavit was written by Mr. McConnel, and presented to me during a term of the circuit court in Jacksonville. He gave as reason that he wished to use it in obtaining a dissolution of the injunction to arrest the prosecution of the work on the railroad, issued by one of the judges of the Supreme Court.

Question 32, by Mr. McConnel: Did you not swear to the affidavit?

Answer: Yes.

Question 33, by Mr. McConnel: Is it any less true because McConnel drew it up?

Answer: The affidavit is not less true; but if I had known that it was intended to have been used for any other purposes but the one alleged, I should have given a more particular detail of circumstances.

Question 34, by Mr. Hardin: Did you ever authorize or request Mr. McConnel to purchase any lots for you, in Jacksonville, of Mr. Stevenson; or did he ever tell you he had purchased any lots for you of him?

Answer: No.

Communication from Mr. James M. Bucklin, received by the committee, February 6, 1839, *as further testimony, and ordered to be appended to his examination.*

"With regard to the testimony which I have given in obedience to the call of the committee, I wish to direct its attention to the fact, that my report to Mr. McConnel on the subject of the Naples branch and the ensuing correspondence transpired after the date of my affidavit, which Mr. McConnel submitted to the committee to be filed with my testimony; and that this affidavit was given without reference to the claims set up by the Jacksonville and Naples Railroad Company to the right of way over the ground now occupied by the Northern Cross railroad. This explanation seems to be necessary, because the facts developed by the correspondence may appear irreconcilable with the affidavit which I could not have signed after that correspondence took place.

J. M. BUCKLIN."

Joseph Duncan, being duly sworn, was examined as follows:

Question 1, by Mr. Gatewood: Do you know whether the Jacksonville and Naples and the Jacksonville and Meredosia Railroad Companies united in their respective works? If so, state your knowledge, or what you have heard McConnel say.

Question 2, by Mr. Gatewood: Do you know whether McConnel owned any interest in the Jacksonville and Naples Railroad Company? If so, state your knowledge and what you have heard him say.

Answer to questions 1 and 2: An arrangement was entered into between myself and others, who were interested in the Jacksonville and Meredosia railroad with Charles Collins and others, who were interested in the Jacksonville and Naples railroad, by which the roads from Naples and Meredosia were to be united at some proper point, and form one stem to Jacksonville. After this union of the interests of the railroads, Judge Lockwood was chosen president, and the stock was chiefly taken by Charles Collins and myself. Mr. Collins was represented, at the first meeting of the company after this union was agreed upon, by Murray McConnel, Esq. and M. Leslie, Esq., who claimed to be equal partners with him in his subscription for the stock in said railroad. This meeting took place in the year 1836, and before Mr. McConnel was chosen Commissioner of the Board of Public Works.

Question 3, by Mr. McConnel: You have stated a transaction in relation to the Jacksonville and Meredosia Railroad Company. State now if you know whether McConnel ever had any interest in the Naples Railroad Company.

Answer: I know of none except the interest claimed in the stock subscribed or agreed to be paid by Charles Collins.

Question 4, by Mr. McConnel: Is not the Jacksonville and Meredosia railroad charter relinquished; and was it not relinquished before the work was done upon the Northern Cross railroad?

Answer: I believe it was relinquished before any work was done on the Northern Cross railroad.

Question 5, by Mr. McConnel: Did you ever see a subscription book of the Meredosia Company; and, if so, did either Collins or McConnel pay any thing, or have any interest in said company?

Answer: I am not certain whether the subscription was actually entered in a book, but think it was, though I believe no money was paid when Mr. Collins entered into the arrangement referred to.

Question 6, by Mr. McConnel: Did you ever see a subscription book of the Naples company; and, if so, do you know whether McConnel ever had any interest in said company?

Answer: None except that stated in my first answer, which was in the two roads when united.

Question 7, by Mr. McConnel: State whether there was a railroad constructing by a company called the Naples and Jacksonville Railroad Company, from Naples towards Jacksonville, at the time of this arrangement referred to by you. Also whether you heard Mr. McConnel say he owned any interest in the Naples company, or in the work done on said Naples railroad.

Answer: I know that a railroad was actually constructing from Naples in the direction of Jacksonville in the year 1836, which was called the Naples and Jacksonville railroad; but I have no knowledge of McConnel's having any interest in said road, unless it may be inferred from his having claimed to be an equal partner with Mr. Collins and Mr. Leslie in the stock subscribed by Collins in the proposed union of the

road with the Jacksonville and Meredosia railroad referred to in my first answer.

Question 8, by Mr. Hardin: Did you own the land where the railroad lot was located in Jacksonville, in the spring of 1837, and other land adjoining thereunto? If so, state whether Mr. McConnel ever applied to you to purchase several acres of land where said railroad lot is situated. If so, the time when, and whether it was before the Northern Cross railroad was located through Jacksonville; also state the conversation, if any, which took place between you and Mr. McConnel on that subject, and whether he proposed to purchase for himself or for the State.

Answer: At the time the railroad was located at Jacksonville in 1837, I owned the lot and land condemned for a square, also the lots east and west of the lot on which the office was built, and about thirty acres of land north and west of said location of said square. Before the survey of location of said road or square was made, and after Mr. McConnel was appointed to office, he applied to me to purchase about five acres of the land above described, which he said he wanted for a calf pasture as it was convenient to his residence; to which I replied that I expected he wanted it to pasture his steam-engines in. At this remark which was rather jocular on my part, Mr. McConnel appeared to be offended, but in a short time after, perhaps ten or twelve days, he informed me that my suspicions were right; that he had ascertained that the road would be located at this point, and that he wanted to purchase a lot of me for a depot.

Question 9, by Mr. Hardin: Do you know whether lot No. 7, in your north addition to Jacksonville, formerly owned by Fogus, adjoins the lot in said town condemned for railroad purposes.

Answer: It does.

Question 10: Did you ever hear Mr. McConnel say for whom he purchased the property of Stevenson, adjoining the lot Fogus sold to Mr. McConnel by the railroad in Jacksonville?

Answer: I heard him say it was for Mr. Bucklin.

Mr. Miron Leslie submitted the following testimony, in writing, which was received by the committee, and, after being sworn to and subscribed by Mr. Leslie, was ordered to be copied.

No. 1.

I, Miron Leslie, of the county of Morgan, and State of Illinois, on oath depose and say, that I am President of the Naples and Jacksonville Railroad Company, and have been since the first organization of said company; and as such president have had the control of and have done nearly all the business of said company from first to last. Myself and Charles Collins have paid all of the stock that has been subscribed and paid, with the exception of a very small sum of money amounting to less than one dollars; which said sum of money was paid on A. W. Parsons' subscription by him, and which I believe has been refunded to him in a settlement between him and the said Collins and myself. Except this last mentioned sum, Collins and myself have paid every dollar that has been expended on said road from first to last, up to the time that a part of said road was taken by the State through the action of

the Commissioners of the Board of Public Works at their meeting in June last. I know all the individuals who subscribed for stock, and I know that Murray McConnel never did subscribe for any of the stock of said company, upon the books of said company, nor have I any knowledge that he ever owned, directly or indirectly, any interest in said road or company; but I have every reason to believe, and do believe, that he has not or ever has had one cent of interest or property in the Naples branch road in any form, manner, or shape. I further state, from the situation I do and have occupied in said company, I do not believe that the said McConnel could have any interest or property in said company without my knowledge. I further depose and say that I attended the meetings of the Board of Commissioners of Public Works at Vandalia in June last, in conjunction with two other citizens from Morgan county, who were not owners of any of said road, and at that meeting made application that the Naples branch be made a part of the Northern Cross railroad; that prior to the final action of the Board, I did not know how any member would act upon the subject. I had never been informed by word, deed, act or intimation, how McConnel would vote or act in said Board upon that subject; nor do I now know whether he voted for or against making said branch road a part of the Northern Cross railroad. I further state that I have a general knowledge of who are the owners of property in Naples, and on the line of said branch road; and I do not know that Murray McConnel owns one foot of land in Naples or on said line; but, on the contrary, I believe he has not, in any manner or form, one dollar's worth of real estate there, unless it is a part of a warehouse that the firm of McConnel, Ormsbee & Co., carry on grocery business in; and whether he owns any part of that I do not know, except from the members of the firm who told me they had taken the house of T——— towards his part of the capital of the firm.

Question: Was there any understanding or agreement between Mr. McConnell and the Naples Railroad Company, that the Northern Cross railroad between Jacksonville and the Illinois river should be located down Wolf run?

Answer: There was never such understanding or agreement. And I further state that I did not know that the road would be, or was located down Wolf run, until the engineer's report was made public.

Question: Do you know any reason why Mr. McConnel caused more lines than one to be run for the Naples branch?

Answer: After the survey of different lines for said lateral branch had commenced, I addressed a letter to Mr. McConnel upon the subject, as President of the Naples Railroad Company; which said letter is published in the Commissioner's report. About this time I had some conversation with Mr. McConnel, in which I remarked to him that I understood that the Board at their meeting in Vandalia, when they ordered a lateral branch made to Naples, designed to take our road as it was, and make such repairs as might be necessary. Mr. McConnel replied to me that he would have the whole surveyed, and all the facts made public, and would learn from actual survey which route was was best for the State, in view of our rights as a company.

MIRON LESLIE.

No. 2.

I, Miron Leslie, of the county of Morgan, and State of Illinois, on oath depose and say, that Murray McConnell made a bargain with Charles Collins, of St. Louis, for a small light-draft steamboat, which the said Collins owned and used for a ferry boat at Naples, which boat at the time was nearly out of water at the ferry landing, upon the following conditions: That if the said Collins would build a suitable cabin on said boat to accommodate an engineering company to survey the Illinois river, and have it and the boat in readiness by a day then named, (which was six or seven days after said bargain, conversation, or agreement above alluded to, was had,) upon this further condition: that if after the said boat was put afloat and the cabin built as aforesaid, the engineers of the State should pronounce said boat fit for the service, and if the same was not in readiness by the day named, whether fit or not, he (McConnel) would not take the boat. The price that was agreed upon was twenty or twenty-five hundred dollars, I am not positive which; the money to be paid upon the approval and reception of the boat. I was present when Collins commenced fitting the boat, and saw him every day from that time until the day named, I believe. I rendered some assistance in trying to get the boat afloat. I sent fifteen or twenty men who were at work for me to assist several days in succession in getting said boat into the river, which was not effected by the day named in the contract; on which day Mr. McConnel was at Naples, and in my presence refused to take the boat, as the terms of the contract had not been complied with as to time. Mr. Collins then applied for further time, and urged as a reason that he had expended several hundred dollars in preparing the boat which would be lost to him; but Mr. McConnel refused to extend the time, and refused to take the boat, and did not take it. Afterwards Mr. Collins made another disposition of the boat, and thus ended the whole affair. Mr. Collins received no money from Mr. McConnel, as I learned from the conversation had at this time between them.

Question: What was the value and description of the Collins' steamboat?

Answer: The boat was flat bottomed and drew about ten or twelve inches of water, was about forty feet long, had one large boiler, and a very powerful engine for a small one. The engine would propel the boat, I should think, six or seven miles an hour, in the Illinois river, and was sufficiently large to accommodate an engineering company to survey the river.

Question: Would said boat, when fitted up according to the contract, be useful to survey the river at its lowest stage last summer and fall?

Answer: I have no doubt but it would have been the cheapest way that could have been devised to survey the river; and, from what I heard from the engineers, the only way they would consent to enter upon the survey, on account of health and convenience. I heard Mr. McConnel propose to get a keel-boat for the purpose, and the engineer told him he would not enter upon the service in that manner. From the best information I have, said boat could have run from the head of steamboat

navigation to the mouth of the river, without any interruption, at the lowest stage of water. I consider the price proposed very cheap for such a boat.

Question: Would it be useful in attending upon the dredging-machines and clearing out the river?

Answer: It might be of use, but to what extent I am unable to say. I heard experienced men say that a scraper could be attached to it and sand bars removed with facility, but I do not know much about it myself. I think the principal object of buying the boat was to survey the river during its lowest stage last summer and fall, that the obstructions might be more fully ascertained, and with less expense than to attempt a survey in high water.

Question: Why was a voucher taken for it?

Answer: Because Mr. McConnel said that, if the boat was in readiness by the time named, it would be an expenditure property within a which he could not do, if he waited until the time named, but said he would take a receipt for the money, and leave the money in bank for Collins, if he complied with the contract, but would not pay for it until the engineer who was going upon the survey accepted the boat, and decided that it would answer.

MIRON LESLIE.

No. 3.

Question: What do you know about Mr. McConnell's interest in property at what is called Morgan City?

Answer: I know that he purchased an undivided eighth part of a quantity of land lying between the Illinois bottom and Jacksonville, and that the place called Morgan City, which is at the summit level between Jacksonville and this river, was a part of said purchase; that his interest was an equitable one, no deed having ever been executed for the same. This purchase was made by Mr. McConnel the year before the law providing for a system of internal improvements was passed, and the first cost of the same was one thousand dollars; and long after the purchase, and after the location of the road where it now is, Mr. McConnel urged me to take his interest at twelve hundred and fifty dollars, which I declined doing. He afterwards, and some time in 1838, sold his interest for about three thousand dollars. This is all the property or interest that I have any knowledge or belief that Mr. McConnel ever owned on the now located route of the Northern Cross railroad, or its immediate vicinity between Jacksonville and the Illinois river.

Question: Did Mr. McConnel, at the time of the location of the road, own more land and property on Coon run than he did on Wolf run and at Morgan City?

Answer: My knowledge of Mr. McConnel's owning land on Coon run is not derived from record knowledge; but previous to the passage of the internal improvement law, and since, I have been informed by Mr. McConnel and others that he had a large amount of land of Coon run. McConnel has shown me several tracts of land on Coon run, which he said he owned. I have seen duplicate receipts from the land office, showing the purchase of land by Mr. McConnel, which he said lay on and in

the vicinity of Coon run, but I did not examine said receipts; from information derived of the character above described, I have always thought and believed that Mr. McConnel has twice the interest on Coon run that he ever had on Wolf run route.

Question: Were you one of the contractors, in conjunction with January & Dunlap, for the construction of the Northern Cross railroad from the Illinois river to Springfield?

Answer: I was.

Question: State what you know about the permanent location of the road at Meredosia?

Answer: I never understood that the road was permanently fixed at Meredosia, until surveyed and staked out where it now runs to the river. As contractors, we commenced grading said road about seven or eight miles from Meredosia, and did all the principal work that we did the first season from that point towards Jacksonville. We under-let to James Waldo and others some grading near Meredosia, and I believe all of said work was out of the town; they were anxious to commence in town, but we refused to let any such contract. One of the reasons that operated upon my mind to refuse was the fact that it was not definitely determined where the road would strike the river at Meredosia. My co-contractors urged as a reason that the first part of the grading from the river was reserved from the per mile part of our contract, and therefore could not be conveniently under-let. Many other reasons might have been urged by January & Dunlap, with whom the principal conversation was had about the sub-contract; and much conversation that I never was informed of, I have no doubt did pass between them; as January & Dunlap and the Waldos, were all Meredosia men in feeling and interest, while I was a Naples man in feeling and interest, and Waldo never talked with me upon the subject. At the time the contract was taken I was confined at home by the sickness of my family, and had no knowledge of any grubbing or chopping of trees at Meredosia, until after it was done. As soon as I found it out I called the propriety of the thing in question, inasmuch as we had determined to commence our work in Wolf run, and for the reason that the work was not laid out, and January & Dunlap gave as a first reason that the law required us to commence at the river to strike the first blow; and that if ever so slight a commencement was made, it would answer the law. I rather ridiculed the reason, and they then said it would pacify the Meredosia folks, and here the conversation ended. It was a slight affair any how, and I cared nothing about it.

MIRON LESLIE.

Mr. Leslie was then examined as follows:

Question 1, by Mr. McConnel: When was the work commenced for a railroad at Naples, and who commenced it; and had Mr. McConnel ever any interest in the work done there?

Answer: I believe it was commenced in 1836, and by Charles Collins. I have no knowledge that Mr. McConnel ever owned any part of said work.

Question 2, by Mr. Hardin: Were not you and Charles Collins two of the contractors who undertook the contract for the construction of the Northern Cross railroad from Jacksonville to Meredosia, and did you and

Mr. Collins, or either of you, ever tell Mr. McConnel before you undertook said contract, or before you commenced work in Wolf run, that if the railroad was constructed down said run, that you would claim damages of the State, on account of your interest in the Naples Railroad Company, or that you would enjoin said work, unless the State made a lateral branch to Naples?

Answer: Charles Collins and myself were two of the contractors for the construction of the Northern Cross railroad between Springfield and the Illinois river. I have no distinct recollection of stating any thing to Mr. McConnel about claiming damages at the time mentioned in the above question, and I never heard Collins tell McConnel so. I do [not] know at what time I spoke of enjoining said road, but it was always the intention of myself and Collins to enjoin the road unless the State made our road a part of the Northern Cross railroad.

Question 3: State when the Naples charter passed and became a law; whether you was not present at all the meetings of the stockholders; whether McConnel was ever present at any meeting of the stockholders, and whether he ever took any interest whatever in the concerns of said company.

Answer: The Naples Railroad Company were chartered in 1837. I have been present at every meeting of the stockholders of said company. Mr McConnel never was present at any of said meetings, and never took any interest in the affairs of said company.

Question 4: Was there ever a meeting held by the directors of the Naples Railroad Company after the the first election of officers of the company?

Answer: According to my best recollection there was two meetings.

Question 5: To whom did Mr. McConnel sell his interest in the Morgan City tract?

Answer: To Charles Collins.

Question 6: Are you not one of the contractors upon the Naples branch? If so, will you state the value of the interest surrendered to the State, in the railroad contract signed by you and others for the Naples road. State what will be the probable cost of said branch upon the plan the same is now being made.

Answer: I am one of the contractors to make the Naples branch. It is difficult for me to state accurately the value of the interest surrendered to the State in the contract above named. I believe that it is much greater than the cost of the branch. I believe that the cost of the road will not exceed eighteen thousand dollars. I am willing, as one of the contractors, to take that sum, and release the State from the payment of any further sum.

Question 7: Who were elected the officers of the Naples and Jacksonville Railroad Company; and was there ever any money paid to the treasurer of said company at its organization, or afterwards, by yourself or any of the stockholders of said company?

Answer: I was elected president, Joseph Coddington, treasurer, and one Lee was appointed secretary. There was paid to the treasurer several thousand dollars. I paid myself above two thousand dollars in a very short time after said company was organized, besides what I had paid for making the road before the company was chartered.

Question 8 Did you purposely conceal from the Commissioner, Mr. McConnel, that you and Collins intended to claim damages of the State, if they made the Northern Cross railroad down Wolf run, or that you would enjoin said road if the State did not adopt your latteral road; or was McConnel kept in ignorance of this fact by accident ?

Answer: It was none of McConnel's business what Collins and myself intended to do; and as to any accidental or predetermined concealment of our business, it is begging a question, no concealment ever having existed. I do not know whether McConnel had any knowledge of the intentions of myself and Collins before the location of said road.

Question 9: Do you claim any damages from the State as president of the board of directors of the Naples and Jacksonville Railroad Company, in consequence of the State undertaking to construct the Northern Cross railroad. ?

Answer: The Railroad Company has surrendered their chartered rights to the State, from the Illinois river to Jacksonville, and the right of way, obtained and owned by the company, for the most part of nine miles, now occupied by the State, and all privileges and rights of every description belonging to said company free of charge to the State, and have agreed to make said branch road for the bare cost of labor and materials, without any charge for time or trouble, upon conditions that the State pays for said branch road at its costs, and makes it a part of the Northern Cross railroad.

Question 10: From your knowledge of the rights of the Jacksonville Railroad Company, and from your knowledge of the law arising upon those rights, would those rights have been different as to the right of the State to make the State road from Meredosia, whether said road had been located up Wolf run, or Coon run, or on a straight line, or elsewhere?

Answer: I have no hesitancy in saying that that the law has well and fully settled that our rights would be the same, whatever route was taken from Jacksonville to the river; and that making any road on any route between these points by the State, without the consent of the company, would be a violation of our chartered rights.

Here follows the correspondence referred to by Mr. Bucklin in his answer to question 11 to 19, inclusive, on the 36th page of this journal.

X.

JACKSONVILLE, *June* 16, 1838.

SIR: The Board of Public Works has ordered the making of the lateral branch from the Northern Cross railroad to Naples, a copy of which order is herewith enclosed. I have directed that said road be let to contractors on the fifteenth day of August next, at Naples.

You will see by the order, that the Naples and Jacksonville Railroad Company have some rights to be relinquished. It will therefore become necessary for you to some extent to consult the accommodation of said company in the location, but at the same time guarding first the interest of the State. You will proceed, at as early a day as possible, to locate said branch and prepare the same for contracting at said time and place, preparing all the maps, plats, profiles, and estimates necessary to a full and perfect understanding of the work to be done.

Mr. Leslie, represent trust of said company to whom you the necessary information their rights. He will furnish to do the work at Naples and and boarding and all other things necessary in the making of said survey and location.

M. McCONNEL.

JAMES M. BUCKLIN.

Reports and communications in relation to the Naples Branch, together with a map of said branch, and all surveys.

Report of M. McConnel, Acting Commissioner of the First Judicial Circuit

FIRST JUDICIAL CIRCUIT,
Jacksonville, Ill. July, 11, 1837.

To WILLIAM KINNEY, Esq.
President of the Board of Public Works of the State of Illinois:

SIR: I believe that it is the duty of every public officer and agent of the people to whose charge is confided an important trust, and especially where the disbursing of the public money is a part of that trust, to embrace every opportunity of informing the people of the manner in which that duty is being performed. I therefore take this method of informing you, and, through you, the people and their representatives, of what has been done in relation to internal improvements in the first judicial circuit, since the first organization of the Board of which you are president.

Shortly after the first meeting of the Board, and after my return to the circuit, I employed Marcus A. Chinn, Esq. to survey and locate that part of the Northern Cross railroad situated between Springfield and Jacksonville. A company was immediately organized, and Mr. Chinn, using his own mathematical instruments, took charge of said company, and entered immediately upon the duty assigned him; and by a constant and close application thereto, both by him and the assistant engineers under his charge, and being aided by the unusual evenness of the route between those places, he was able to complete said survey and furnish all the necessary maps, plans, profiles, and estimates of said route, before the tenth of July inst. For more particular information in relation to said survey, reference is here made to the report of Mr. Chinn, which is hereto annexed.

At the time Mr. Chinn was employed to survey and locate said road, Mr. Bucklin the chief engineer of this district, was absent in the eastern cities in search for mathematical instruments, and in the employment of the State. He did not arrive in this country until about the middle of May last; and owing to the delay consequent upon organizing a company, procuring camp equipments, and other things necessary for the field, a survey was not commenced west of Jacksonville until late in the month of May. At that time Mr. Pollock was employed as assistant engineer, and a survey was commenced at Meredosia on the Illinois river. Great difficulty was encountered in finding a proper and eligible route through the river hills, or bluffs of the Illinois. The line of the road was found

to lie in a direction not suited to the course of the valleys of the small creeks and ravines putting through these hills. From the altitude of these bluffs, and from their steep and sudden ascent from the bottom lands of the river, it was found impossible to pass them, without the aid of inclined planes, to be overcome by stationary power, except by passing through the valley of some one of these small tributaries of the Illinois river before mentioned. Consequently much time was spent in examination; and various lines were run, and all the creeks and ravines within any reasonable distance of a direct line for said road were surveyed. The distance between Jacksonville and the termination of said road at Meredosia, on the Illinois river, does not exceed twenty miles: yet there has been more than one hundred miles of experimental line surveyed by Mr. Bucklin and the engineers under his charge, with a view of ascertaining the best route for said road. Upon all these lines the grade has been fixed as regulated by the Board at its last meeting, and the estimates carefully made, and the cost of making the road over each calculated; and the route that was found to furnish a foundation for the best road, and be at the same time the cheapest, was adopted. It will be seen by a reference to the reports of Mr. Bucklin and Mr. Pollock, which are hereto annexed, that the line adopted, is by far preferable, and the road made thereon will cost fifty thousand dollars less than any one of the other lines surveyed. Although the line adopted may be two miles or thereabouts longer than some others surveyed, yet I could not think that I would be justified in expending a large sum of public money in making a road upon a line contrary to the reports and advice of competent and able engineers. it is now believed that the line adopted is an exception, for its smoothness of surface, cheapness of construction, and easy grade, to all other lines that can be found passing through this range of hills.

Notwithstanding all these difficulties, and notwithstanding the almost constant rains in this part of the country in the month of June, these engineers completed the location of the road between Jacksonville and the river, together with all the maps, profiles, and estimates, on said line, a sufficient time before the tenth of July to enable all persons wishing to take contracts upon said road to obtain all necessary information relative thereto.

When the engineers first commenced surveying this road between Springfield and the Illinois river, they were informed by me that it was expected that all of said road would be surveyed, and ready to put under contract, by the first week in July; and with a full belief that it could be done, I proceeded to advertise, according to law, that I would receive sealed proposals for the construction of said road, from the date of the advertisement to the tenth of this month. Said surveys were completed as expected; and by four o'clock in the afternoon of the tenth of this month, many sealed proposals had been received for contracts upon said road; and after the hour, said proposals were opened, examined, and compared by me, in the presence of, and aided by Mr. Wright, Commissioner of the Board of Public Works of the fifth judicial circuit, together with Messrs. Bucklin and Chinn, the engineers upon said road. Bidders appeared from various parts of this State, and some from other States in the western county; and much anxiety was manifested to

procure contracts. None of the proposals could be said to be exorbitant; yet some were higher than the commissioners and engineers present would think prudent to accept. Upon the comparing of the proposals, it appeared that all the bidders, except in two instances, had neglected, in their proposals, to offer that, in the event that the State should not furnish the money to pay for the work as the same progressed, that they would take warrants, or State bonds, in the place of money, as they were particularly notified to do in the advertisement of the letting of said work; and, as it was found that these two proposals were as low if not lower than any other, it was decided to accept, for that part of said road between Jacksonville and the Illinois river, one of those proposals, being the one made by Miron Leslie, James Dunlap, Thomas T. January, and Charles Collins; and, for that part of said road between Springfield, in Sangamon county, and Jacksonville, in Morgan county, it was decided to receive the other proposal referred to, being the joint proposal of James Dunlap, Thomas T. January, Charles Collins, and Miron Leslie. All of said persons being then present, they were immediately notified of said acceptance; whereupon, they immediately came forward, and entered into two separate contracts to the State, binding themselves to complete all of said road in the best and most substantial manner from Springfield to the Illinois river at Meredosia, a distance of fifty-seven miles or more, for a small amount over eight thousand dollars per mile. They bind themselves to furnish to the State all the necessary locomotives and cars upon said road, ready for use, charging the State only the cost of the article when delivered upon the road. They agree to commence said work by or before the first day of August next, and to finish the road between the Illinois river and Jacksonville, by the first day of December, 1839, and between Jacksonville and Springfield, by the first day of August, 1840. They further agree that, if the State should not at all times furnish the money to pay for said improvement as the same progresses, they will take State bonds, or warrants drawn and signed according to the 54th section of the law to establish and maintain a general system of internal improvement.

With all and each of those gentlemen making this contract, I am personally acquainted. I know them to be men of property, industry, and enterprise, and I have every confidence that they will comply with their contracts, and make the road within the time and in the manner specified.

Before leaving this subject it may be necessary to give some information in relation to a certain charter, heretofore granted to a company to make a road from Meredosia to Jacksonville. This charter was passed in the year 1835, and a kind of survey of the route was made some time after. The amount of stock, as granted by the charter, is one hundred thousand dollars, divided into shares of fifty dollars each. By a provision of the charter it is required that at least five dollars should be paid, by the person taking the stock, upon each share subscribed; and unless such payment shall be made, the subscription is by said charter invalid. It is now ascertained that various subscriptions for the capital stock of said company have been made from time to time, and that these subscriptions amount, together, to near the sum of one hundred thousand dollars. I am informed by many of the persons who subscribed for this

stock, that no money was really paid when said stock was taken; or, if any was paid, the same was immediately returned to the subscriber, and, in some instances, a due bill, or note for the amount substituted in its place. If this is a proper and legal taking of stock under the charter, then the company may in some measure be considered organized. But, on the other hand, if it is a perfect evasion of the law, then the stock is not taken; and no rights have been acquired under the charter, and no directors could be legally chosen, with power to surrender said charter under the provisions of the fiftieth section of the law in relation to internal improvements.

Under these circumstances, and for the purpose of avoiding all doubts upon the subject, I have drawn up a formal relinquishment of said charter, in conformity as near as possible with said section; and procured the same to be signed by a majority of the original corporators mentioned in the charter; and by the holders of a large majority of the stock subscribed for in the manner before pointed out. This release of said charter is to be filed in the office of the Secretary of State, according to law, before any work is done upon the line of said road.

In conclusion, I would say that the prospects of success in the prosecution of the system of internal improvement in this part of the State is flattering indeed. Most of our roads pass through a dry, healthy, and fertile country; already, comparatively speaking, densely populated, with a hardy, healthy, industrious, and enterprising class of inhabitants; furnishing by their labor all the necessaries of life in a great abundance. In addition to this, it has been found, upon examination, that all the materials necessary in the construction of these improvements, (except the iron) exist in great abundance, in almost all instances, directly in the vicinity of the works themselves; and that the difficulty, apprehended in the first commencement of the system, of procuring materials to carry on the work, has been found to be unfounded.

With much respect, sir,
I remain yours, &c.
M. McCONNEL,
Acting Commissioner First Judicial Circuit.

Report of J. M. Bucklin, Chief Engineer of the Western District.

JACKSONVILLE, *July* 9, 1837.

MURRAY McCONNEL, Esq.
Acting Commissioner First Judicial Circuit:

SIR: All the surveys and examinations have been completed that are conceived necessary to a full and accurate knowledge of the country between this place and Meredosia, and of the best location for a route for the 1st division of the Northern Cross railroad. Therefore, in compliance with the provisions of the 12th section of the internal improvement law, I now, through you, lay before the Board of Public Works a report of the facts that have presented themselves to my personal observation and researches, together with the result of the surveys as detailed by Mr. Pollock, under whose immediate charge they have been executed.

To his report and to the maps and profiles I refer you for a particular description of the different lines, their comparative length, &c.

In determining the line that should be adopted for the location of this division of the road, we must direct our attention more particularly to the vertical and horizontal position of the different passes through the bluffs of the Illinois river, as the transit of the road from the bottom to the table lands above will have a most important effect upon the tractive power employed upon the road, and will indeed be the measure of the power to be provided for its whole extent. Consequently, it is important to adopt the line which requires the least tractive power; or, in other words, the inclination which is the shortest, straightest, and most gradual. These conditions are best fulfilled in the route by Wolf run, the graduation being 10 feet in the mile less than by any other route, the length of curvature 1 mile less, and the least radius of curvature nearly double.

In the valley of Raccoon creek, the least radius is 800 feet, and highest gradient 40 feet to the mile. The character of this route is unfavorable to the permanency of the work, and the frequent crossings, and the protection-wall required, will make the graduation of the road-bed very expensive. It is two miles shorter than the route by Wolf run, but will exceed it in cost $54,000. The route by Davis' branch, about the same length as the preceding, is more favorable, although not much less expensive. The length of curvature is 2½ miles minimum, radius of curvature 800 feet, and graduation 40 feet to the mile. On all these routes, materials for the construction of the road can be obtained in abundance.

With a view to economy and permanency of construction, and greatest useful effect when in operation, the consideration of the above mentioned facts have determined me to select the route by Wolf run to effect the ascent of the line from the Illinois bottom. Mr. Pollock is therefore now engaged in revising the location of that line. The distance will probably be shortened, but no material change can be effected. Annexed will be found an extract from the estimate exhibiting the comparative cost of the different lines.

Respectfully, your ob't servant,

J. M. BUCKLIN,

Principal Engineer Western District.

WOLF RUN.

Cost of graduation via Wolf run - - -	$92,303 95
Superstructure and workmanship, including iron -	114,808 69
Two miles of double track, turn-outs, water stations, &c. - - - - -	16,720 00
	$223,832 64
Add 10 per cent. for contingencies and superintendence - - - - - -	22,383 26
Total cost - - - - - -	$246,215 90

Distance, 24.909 miles. Cost per mile, $9,884.

RACCOON CREEK.

Cost of graduation - - - - -	$150,259 29
Superstructure and workmanship, including iron -	114,808 69
Two miles of double track, turn-outs, water stations, &c.	16,720 00
	281,787 98
Add 10 per cent. for superintendence and contingencies	27,317 35
	309,105 33
Total cost of Wolf run route - - -	246,215 90
	$64,889 43

Distance, 23.04 miles. Cost per mile, $13,042.

DAVIS' BRANCH.

Cost of graduation, - - - - -	$145,499 78
Superstructure and workmanship, including iron -	105 592 75
Two miles of double track, turn-outs, water stations, &c.	16,720 00
	267,812 53
Add 10 per cent. for superintendence and contingencies	25,109 25
	292,921 78
Total cost of Wolf run route - - -	246,215 90
Difference in favor of Wolf run - - -	46,705 88

Distance, 22.893 miles. Cost per mile, $12,800.

STATE OF ILLINOIS, *Morgan County*:

Personally came James Bucklin before me, the undersigned, an acting justice of the peace in and for said county, and made oath that the statements and facts set forth in the foregoing report, signed by him, are true, according to the best of his knowledge and belief. Witness my hand and seal, this 10th day of July, 1837.

JAMES DEATON, *J. P.* [SEAL.]

Report of M. A. Chinn, Principal Engineer upon that part of the Northern Cross railroad between Springfield and Jacksonville.

JACKSONVILLE, *July* 10, 1837.

TO MURRAY MCCONNELL, Esq.
Commissioner Board Public Works:

DEAR SIR: Being engaged in the surveys and location of so much of the Northern Cross railroad as lies between Jacksonville and Springfield, and in the capacity of chief engineer thereof since the 29th day of April last, I am enabled to lay before you the following succinct statement of my operations.

From the date above mentioned to the 8th day of May, the time was occupied in organizing a party and in a reconnoissance of the country

through which the road passes. The reconnoissance was completed in three days, and the routes for examination fixed upon, to wit: a route passing from the north side of the town of Jacksonville running east, crossing the south and Briar forks of the Mauvaise-terre along the centre line of township 15, following the Ridge prairie through to Springfield; which is called the southern route. From thence it was intended that we should return upon a route by way of the Beardstown bridge over Spring creek, and following the prairie from thence north of the Island grove and the North fork of the Mauvaise-terre, penetrating that grove and crossing it below its junction with the South fork and near the Indian creek bridge over the Mauvaise-terre, reaching the town of Jacksonville on the north by the northern route.

These being determined on as the base of our surveys, on the 8th of May we commenced operations pursuant to that plan, and made rapid progress, making all the necessary surveys (experimental) and map and profile of the same in camp, and reached Springfield on the 23d May. Being detained there by rain, I had sufficient time to examine minutely the whole waters of Spring creek within the range of the northern route.

The plan of crossing that stream at the Beardstown bridge was abandoned, the channel being 80 feet below the general level of the country; and the line which was projected to that point was objectionable on account of grades and curvature.

In fact, the only feasible crossing was found to be about a mile below the bridge, in a direction entirely out of the proper range for the line, and could only be reached with grades of thirty feet per mile by a tortuous serpentine course, and in all respects very inferior to the southern route. Your instructions dated Jacksonville, 20th May, 1837, then came to hand; and in obedience to them, from which the following is extracted, I pursued the Berlin route, to wit: "Commence on the ridge on the west side of the creek west of town, and about opposite the north side of the public square, and from thence search out and run a line upon the most favorable ground to cross Spring creek below the forks, and thence on the North prairie to William Sample's in this county, or thereabouts. But if you should find upon examination that Spring creek cannot be crossed at that point, and preserve the grade of 30 feet to the mile, or if it cannot be crossed without stationary power to be used upon an inclined plane, except by heavy cuts and high embankments, greater than necessary upon the Mauvaise-terre, east of this place, then abandon the line altogether, and go back to the starting point west of town, and from thence search out and survey a line in the direction of Berlin, leaving that town a short distance to the south, and crossing Spring creek west and north of that place, (in the best place) with a view of running down on the north side of the North fork of the Mauvaise-terre. Perhaps you can come up Little Prairie creek from the north end of the Island grove; and really I have little doubt but that it is a better route than to attempt to cross Spring creek below the forks."

In compliance with the above instructions we completed the Berlin route, reaching Jacksonville with surveys on the 9th June, and on the 11th of June we laid before you the profiles and maps of all the surveys, which, together with such explanations of the maps and profiles and verbal de-

scription of the lines, and your knowledge of the country, enabled you at once to select a route for location, and give instructions for the prosecution of the location forthwith, to be ready for contract by the 10th July inst. And on the 13th June, the party was ordered into the field with such additional force as was deemed sufficient to effect the surveys, drawings, &c.

The southern route was selected and a centre line run, beginning at stake 565 of Mr. Bucklin's line, being on Main street in Jacksonville; and pursuing generally the line of the southern route, with such changes as were found advisable, we reached Springfield June 26th, being only thirteen days out in locating 33.15 miles, the distance from Springfield to Jacksonville. We returned to Jacksonville on the 27th; from which date such of the party as was deemed to be necessary were retained in the service, to wit: John Woods, James B. Thomas, Robert H. Chinn, John W. Hedenberg, Charles Hardin, and B. F. Orear, all of whom have assiduously performed the various duties of drawing and calculations as I prescribed; and for further and more definite information concerning the lines and surveys, and estimates, I beg to refer you to the profiles and estimates, &c. &c. to wit:

Profile with tables over each section, exhibiting an approximate estimate of the grading and masonry and cost thereof—the excavation and embankments both estimated to a side slope of 1½ base to 1 perpendicular—and profiles of the experimental surveys without such tables. Also, a table containing the rate allowed in the estimates for removing earth.

A table of the grades per mile on the location, and one for each of the experimental surveys. Also, drawings of three plans exhibited for superstructure, with estimates of the cost per mile attached to each. Also, a sectional map, showing the line of location and the experimental survey.

All the estimates necessary to a letting are contained in the foregoing; and my belief is that a revision of the location will lead to changes, such as straightening the grades and curves, and the line generally, without [changing] the nature of the work to be performed, but may materially lessen the cost of graduation on some of the sections.

The profiles and estimates, field-books and all the necessary papers and a more detailed report will be ready for you in the course of this week.

It will be observed, by reference to the maps and profiles, that the length of the located line is very nearly the same as that of the southern route of experimental survey.

The location, measuring from Main street in Jacksonville to the public square in Springfield, is 33 miles 760 feet; and, by experimental survey from Main street, in Jacksonville, to a point south of the town of Springfield, about a half mile from the termination in the square, is 32 miles and 2,500 feet; the Berlin route, measuring from a point about a half mile from the west side of the square in Springfield to a point one mile from the termination in Jacksonville, making the whole distance about 33 miles 1,286 feet, something longer than the location adopted. It however would have been shortened somewhat upon a location on that route, but not to any advantageous extent. The increased cost of grubbing and clearing on that route, I am confident, would more than counterbalance

the advantages of the proximity of timber to be used on the road. Good timber is scarce on Spring creek, and the main reliance upon the neighboring groves must be placed upon Lick creek.

In referring to the plans of superstructure, it will be observed that the aggregate cost of superstructure upon

Plan No. 1 is -	$224,705 07½	Per mile, -	$6,790 50
No. 2 -	211,256 33	do. -	6,372 74
No. 3 -	237,178 91	do. -	7,155 02
The aggregate cost of graduation -		$78,960 78	
Add 10 per cent. contingents - -		7,896 07	
		$86,856 85	

Average per mile upon the graduation of the location line, $2,620 11.

All of which is respectfully submitted.

M. A. CHINN.

STATE OF ILLINOIS, *Morgan County:*

Personally came M. A. Chinn before me, the undersigned, an acting justice of the peace within and for said county, and made oath that the facts and statements in this, his report, as engineer, signed by him, are true according to the best of his knowledge and belief. Witness my hand and seal, this 10th of July, 1837.

JAMES DEATON, *J. P.* [SEAL.]

Report of Mr. Pollock, Assistant Engineer First Division.

JACKSONVILLE, *July* 9, 1837.

To J. M. BUCKLIN, Esq.

Chief Engineer of the Western District:

SIR: The examination of the country between Jacksonville and Meredosia, with a view of selecting the best route for a railroad between the two places, was commenced at the latter place, on the 24th of May. On the 29th, agreeably with your instructions, I joined the corps which had been previously organized; and which had advanced in the examinations so far as to extend an experimental line from Meredosia to a point in the Illinois bottom, near the bluffs at Wolf run. From a point in this line near Mr. Lusk's house, about two miles from Meredosia, I commenced a line which I ran up the valley of Raccoon run to station 213, near ten miles from Meredosia. At this point the valley turns short to the south; but the line was continued eastwardly up a ravine which lay in a favorable direction, passing near Mr. Evans'. This line was continued across Lick branch to station 310, which would be common to a route crossing Lick branch higher up. The deep cutting which would occur near Mr. Evans' at the head of the ravine mentioned, and the difficulty of crossing Lick branch without great expense, induced me to return to the valley of Raccoon run, and continue the line about one mile further up it, to where a tributary presented a more favorable route for ascending to the table land. The cutting at the head of the ravine was light compared to the other route, and the crossing of Lick branch

much more favorable. This line was continued on the ridge that divides the waters of Lick branch and Indian creek from those of the Mauvaise-terre, passing by Mr. Dewey's, and crossing the latter stream at the road opposite Mr. Jarret's, and from thence nearly direct to Jacksonville. The formation of the banks of the Mauvaise-terre upon this route are unfavorable for crossing it, particularly the west bank, on account of its rapid descent at the distance of half a mile from the stream, and the lowness of the bank at its nearest approach. From Meredosia to Jacksonville, on this route, there are no material obstacles except those I have mentioned. The valley of Raccoon run ascends gradually, and the grade will be moderate, except in ascending to the table land, where a grade of forty feet per mile will be necessary. The curves throughout the valley are numerous, and in several instances the radius of curvature will be short. It will be necessary to raise the plane of the road several feet above the surface of the valley on account of freshets which overflow the banks of the stream to the depth of three feet.

At a point in the above line, about one mile west of Jacksonville, I commenced a line in the direction of Meredosia by the way of Wolf run, which was continued to the Mauvaise-terre where the Meredosia road crosses it, without meeting with any serious obstructions. To cross at this point was found to be very expensive, on account of the heavy excavation that would be necessary in order to ascend on the west side, the head of the ravine up which the line ascends being at the height of the table land at the distance of about half a mile. Thence the line was continued to the head of Wolf run, and down the valley of that stream, terminating at the end of the experimental line first run from Meredosia. Upon this route there are no serious obstructions after passing the Mauvaise-terre. The valley of Wolf run is remarkably straight, and its inclination is nearly the same throughout. It will not require a grade exceeding thirty feet per mile, and the radius of curvature will not be shorter than 1,700 feet, except for a short distance at the head, where it would be reduced to 1,400 feet. It will be necessary here, as well as in the valley of Raccoon run, to elevate the road a little above the general surface of the valley in order to be secure from freshets. This valley, however, is less subject to be overflowed than that of Raccoon run, from the fact that it drains a much less extent of country, and because it is nearly a regular inclined plane throughout its whole length, which gives the current more velocity.

The next examination which I made was the valley of Eagle run, commencing at a point opposite the mouth in the line before mentioned as being run from Meredosia. This line was extended the whole length of the valley of Eagle run, and some distance beyond, to a point about half a mile short of Bethel, and terminated. I found the valley of this stream to be much shorter than either of the others, and, in order to ascend to the table land, a grade of sixty feet per mile would be necessary. My attention was next directed to the examination of Davis' branch. The line up the valley of this stream was commenced at a point opposite its mouth, in the same manner as the line up Eagle run, and continued throughout the valley, terminating at the eastern extremity of the line up Eagle run. The character of this stream is quite different from all the others for the first two miles, it being broken and undulating.

The bed of the stream for that distance would average eight or nine feet below the general surface of the valley. Above that, the undulations are less until approaching near the head of the valley, where it becomes narrow and crooked, and where the radius of curvature would have to be reduced to near the minimum. Moreover, a deep cut of twenty-eight feet would be necessary for a considerable distance at the head of the valley, in order to ascend at the maximum grade.

The unfavorable features presented by this route, the route via Eagle run, and that via the upper crossing of the Mauvaise-terre, were such as to induce me to believe that the choice of routes would lie between Raccoon run and Wolf run; that is to say, that one or the other of these two routes would be chosen, and that the route from Jacksonville to the Mauvaise-terre would be the same in both cases, crossing said stream about a mile still lower down, where a favorable point was discovered whilst crossing at the Meredosia road. Having arrived at this conclusion, I proceeded to make a more minute examination of the lower point mentioned on the Mauvaiseterre, and to connect it with our former line at suitable points by running a line each way. The valley at this crossing is 800 feet wide, being 200 feet narrower than either of the other crossings, and will require little or no cutting at the heads of the ravines which lead to the table land, provided the maximum grade be adopted.

The distance from Jacksonville to Meredosia, by this route, is 24 miles and 47 chains; and the cost of graduation and masonry, $92,304. The distance via Raccoon run is 23 miles and 2 chains, and cost of graduation and masonry, $150,259. Via Davis' branch, the distance is 22 miles and 47 chains, and cost of graduation and masonry, $145,499. Via Raccoon, upper crossing of Mauvaise-terre, and lower crossing of Lick branch, the distance is 21 miles and 36 chains, and cost of graduation and masonry, $161,243. Via Raccoon run, upper crossing of Mauvaise-terre and upper crossing of Lick branch, the distance is 22 miles and 29 chains, and cost of graduation and masonry, $154,380.

Respectfully submitted.

WM. POLLOCK,

Assistant Engineer First Division Northern Cross Road.

By the foregoing reports it will be seen that Mr. Bucklin and Mr. Pollock located the road between the Illinois river and Jacksonville, and that the route located was found to be far the most useful, and to be $64,889 43 cheaper than the Coon run route, and $46,705 88 cheaper than the Davis' branch route. This report was made under oath, both by Bucklin and Pollock.

It will also appear by Mr. Chinn's report, also made under oath, that the location was first made on the north side of Jacksonville, being three days after the 8th of May, 1837, to wit, on the 11th of May.

It appears from this report that Mr. Bucklin had made a location at Jacksonville before the 13th of June, for Mr. Chinn says that, on that day, he commenced his last line at station 565 of Mr. Bucklin's line, on Main street, in Jacksonville. Of course Mr. Bucklin's location was made the week before that date.

It is clear, from this report, that the first line run from Jacksonville towards Springfield commenced on the north side of Jacksonville, on the 11th of May 1837; and that the second line run, commencing at Springfield, terminated at the same place on the north side of Jacksonville, on the 9th of June. This, the final location, was made, and, on the 13th of June, the engineers commenced at this same location to lay out the work for contract eastward; previous to which time, Mr. Bucklin had made a location, and already laid out the work for contract westward from Jacksonville.

All those reports, and the facts therein stated, are submitted to this committee as evidence in this investigation.

M. McCONNEL.

A.

ENGINEERS' OFFICE,
Jacksonville, July 26, 1838.

SIR: As soon as practicable after the receipt of your letter of instructions, of the 16th June, enclosing a copy of an order of the Board of Public Works relative to the Naples branch of the Northern Cross railroad, arrangements were made to carry the order and your instructions into effect. Messrs. Murray and Wilkinson executed all the surveys with great care and ability. Their attention was first directed to the examination of a route direct to Naples, from a point where the line of the Northern Cross railroad arrives into the immediate valley of the Illinois river and takes a northwest direction to Meredosia. In the execution of their experimental line, it was found that, at the distance of about 2,000 feet, it intersected the route of the Naples and Jacksonville railroad, with which route it was continued in a parallel direction to the town of Naples, and terminated at the same point on the bank of the Illinois river, in Water street. The length of this line is 3 miles 4,560 feet, and the estimate of the probable cost, $36,543.

Upon an inspection of the ground between Naples and the line of the Northern Cross railroad, it then became evident that a shorter and more favorable route presented itself by taking the branch out of the main road on the west side of Dixon's lake. A line was accordingly run in the direction of Naples, from Dixon's lake (marked route No. 2, on the map) which intersected, at the distance of about a mile, a half-section line running east and west. This line was pursued to Naples, occupying a travelled road, and entering the town through a street running east and west, and terminated on the bank of the river, about 300 feet south of the northern corporation line of said town.

Upon this route, I believe no damages whatever, for right of way, can properly accrue, as it intersects no town lots, and passes through no enclosed grounds. The length of this route is 2 miles and 3,740 feet, and the estimate of the probable cost, $18,294. Upon a comparison of the two routes, it appears that the last route examined is $18,294, or one-half cheaper, and can be kept in repair at much less cost, as it is one mile and 800 feet shorter, and the crossings of Wolf run and Dixon's lake

are avoided. In view of these facts, and the advantage of the branch being as short as possible, as it must be kept in perpetual repair by the State, it seems to be evident that the interest of the State demands that not only the cheapest route, but, as equally important, that the shortest, and the one that occupies the best ground, should be selected. I have, consequently, no room for hesitation in deciding upon the shortest route, as one "that best comports with the interest of the State." In compliance with your request, I will here state that the distance to Naples from Jacksonville will be 800 feet farther by the last route examined than by the other route.

I have thus laid before you all the facts and deductions from them that I conceive have any bearing upon, or are necessary to a perfect understanding of the subject. How far "the accommodation of the Naples and Jacksonville Railroad Company" is to be consulted in the location of the branch, I cannot take upon myself to decide; and with regard to the rights of this company, to which you have called my attention in your letter of instructions, I not only do not think myself competent to take them into consideration, but I conceive it entirely foreign to my duty, as engineer, to do so. This duty, as I understand it, is confined exclusively to the location and construction of roads, with reference to the adaptation of the features of the country to them, the economical arrangement of the grades and curvatures, the motive-power, &c.

With great respect,

Your obedient servant,

J. M. BUCKLIN.

To Murray McConnel,

Commissioner of the Board of Public Works.

Estimate of the probable cost of the Naples branch of the Northern Cross railroad, via the route of the Naples and Jacksonville railroad.

First Section.

8,759 cubic yards embankment, (from stake 1 to 30) at 20 cents - - - - - -		$1,751 80
8,995 cubic y'ds embankment, (from stake 30 to 50) at 43 cts.		3,867 85
Bridge across Wolf run.		
Foundation - - - -	$200	
90 perch of stone, at $6 - - -	540	
		740 00
Bridge across slough - - -		945 00
Total cost of the first section - - -		7,304 65

SECOND SECTION.

7,037 yards embankment, (from stake 50 to 70) at 35 cents - - -	$2,462 95	
6,526 yards embankment, (from stake 70 to 102) at 17 cents - - -	1,109 42	
1,979 yards embankment, (from stake 70 to 102) at 17 cents - - -	336 43	
Bridge across slough - - -	945 00	
2 culverts, 100 perch, at $8 - -	800 00	
		5,653 80
800 perches stone on each section to secure banks, at $4		3,200 00
		$16,158 45

Superstructure.

3.86 miles, at $3,224, including cost of materials and laying -	$12,444 64	
90 tons iron, at $60 - - -	5,400 00	
One turn-out - - - -	800 00	
		18,644 64
		34,803 09
Add five per cent. for contingencies - -		1,740 15
Total cost - - - - -		$36,543 24

Estimate of the probable cost of the Naples branch of the Northern Cross railroad, route No. 2, commencing west of slough.

13,657 cubic yards embankment, at 17 cents -		$2,321 69
10,289 cubic yards excavation, at 20 cents -		2,057 80

Superstructure.

One turn-out - - - -	$800 00	
2.708 miles, at $3,224, cost of materials and laying - -	8,730 59	
59½ tons iron, at $60 - -	3,570 00	
		13,100 59
		$17,480 08
Add five per cent. for contingencies - -		874 00
Total cost - - - - -		18,354 08

Z.

JACKSONVILLE, *July* 30, 1838.

SIR: Your report in relation to the Northern Cross railroad is now before me. It is a matter of some surprise to find so great a difference in the cost of construction between the two routes. I have no doubt but the first route mentioned can, and will be, made for a less sum than

your estimate. I have thoroughly examined all the questions in relation to this branch, and am constrained to advise the adoption of the first line mentioned, and, by you, reported to be the most costly, for the following reasons: First, the right of way upon route No. 2, which you suppose would cost nothing, has been assessed by men, under oath, and they have reported to me the sum of *five thousand dollars*. Second, the right of way upon the old route has been donated to the State for nothing. Third, no lot for a depot can be had for less than two thousand dollars. Fourth, a depot has been granted to the State upon the old route without cost. Fifth, I have written notice from the Naples Railroad Company, that they have done a large amount of work upon the old route, to the value of sixteen thousand dollars, or thereabouts, and, if the State makes the road, said company will, by their charter, be entitled to full compensation for said work.

This company has further notified me that certain individuals composing that company own a large amount of land and farms upon the line of the Northern Cross railroad, over which the State has never yet acquired the right of way. I have fully examined this part of the question, and am satisfied that it would be safe to estimate the cost of procuring those rights to two thousand eight hundred and fifty dollars. If the old route is adopted, and the road made upon the shortest route from Jacksonville to Naples, all those rights will be surrendered for nothing.

I am perfectly satisfied, from an inspection of the charter of the Naples and Jacksonville Railroad Company, and from a full investigation of the law arising upon that subject, that the right to construct a railroad from the Illinois river to Jacksonville, in Morgan county, has been granted away by the State to said company; and that the making of the State railroad from Meredosia to Jacksonville is an infringement of the rights of that company, and could be enjoined at any time; yet this company have notified me that, upon the condition that said branch is made upon the old route, and the company paid for the work already done, said company will surrender said charter, and all rights under it. This surrender, I consider may be set down as of greater value than the whole cost of the branch. This is one of the charters that the law did not direct the Board of Public Works to procure a relinquishment of; but, in effect, directed the Board to proceed to construct the roads, regardless of their rights.

The following is the result of my investigation as to the difference between adopting the old or new route:

Adopt the new route, and pay for the right of way	$5,000 00
Pay for a depot upon the new route - - -	2,000 00
Pay for the work done upon the old route, and lose it	16,000 00
Pay for right of way for the Northern Cross railroad	2,850 00
	25,850 00
From this sum deduct the cost of the new route over and above the cost of the old route, made by the company - - - - - -	18,294 00
Leaving, in favor of the old route - - -	7,556 00

In addition to this, is the fact that the old route is the best route to Naples, and by adopting it the State can be rendered free from all embarrassment hereafter in relation to the Naples and Jacksonville railroad charter, which I conceive to be a matter of great importance.

Taking all those matters into consideration, I respectfully suggest to you, whether it would not be prudent, and altogether advisable, to adopt the old route, rather than the route No. 2, mentioned in your report. It is advisable to have this work staked out ready for contract immediately, and, at the same time, estimate the value of work done, and materials furnished, by the Jacksonville and Naples Railroad Company, upon the old route.

With much respect, sir,
I remain yours, &c.
M. McCONNEL,
Commissioner of the Board of Public Works.

JAMES M. BUCKLIN, Esq.,
Principal Engineer, Western District of the State of Illinois.

Y.

ENGINEER'S OFFICE,
Jacksonville, July 10, 1838.

SIR: In my report to you on the 26th instant, I endeavored to lay before you all the facts in relation to the character of the two routes examined for the Naples branch of the Northern Cross railroad, the comparative length, cost, &c., without reference to the claims or right of the Naples & Jacksonville Railroad Company. Of the facts communicated in your reply, I could know nothing, nor am I a proper judge of their bearing, of their legal force and value. I am not competent to take them in consideration, and so I have before remarked. It is not my province to do so. I am awaiting your decision as to which of the two routes I shall definitely locate and prepare for contract, and an order respecting the work already done upon the Naples and Jacksonville railroad.

With great respect,
Your obedient servant,
J. M. BUCKLIN,
Principal Engineer Western District.

M. McCONNELL,
Commissioner Board of Public Works.

JACKSONVILLE, *July* 10, 1838.

SIR: Yours of this date, in relation to the Naples branch, was this moment handed to me. I thought that my last communication to you upon that subject was sufficient, but it seems you have not deemed it so. Do you wish a positive command from me to locate said branch upon the old line? I did not deem that actually necessary, but I suppose the facts and circumstances disclosed to you in my last communication would be sufficient to enable any one to determine in favor of the old line at the first glance; but it seems you could not take the responsibility of doing so.

I am thoroughly acquainted with the country over which this branch is to pass, and I have fully examined your report, and I am now satisfied that the bridge you mention across Wolf run, at a cost of $740, is totally unnecessary, as said run, at a trifling cost, may be turned totally away from the work.

Again, one of the bridges you mention as being necessary across the slough upon section 1, at the cost of $945, is altogether unnecessary. Again, you report eight hundred perches of stone work as necessary to protect the embankment, at a cost of $3,200; now, as you have estimated no such item on the main line, which crosses precisely the same character of country as this branch, I am led to the conclusion that this expense is not necessary.

Again, you estimate some of the embankment upon both sections, at 35 to 43 cents per cubic yard. Although not a professional engineer, I am satisfied that this is too high an estimate.

For those reasons and for others mentioned in my last letter to you upon this subject, if you deem it necessary that you should receive from me a positive order to locate this branch upon the old line, then take this as such order; and if the words used are not strong enough to amount to such order, in your estimation, then consider their places supplied by any other words that would be sufficiently mandatory to answer the purpose, and wait no longer for orders.

It is very desirable that this work should proceed speedily, and be shortly prepared for contract, &c. as directed in my first order to you. You will, therefore, immediately give the necessary orders to the assistant engineers to have the same done.

Yours, &c.

M. McCONNEL,
Commissioner Board Public Works.

Mr. Bucklin.

Naples, Ill., *July* 26, 1838.

Sir: We, the undersigned, having been selected and sworn as appraisers to assess the damages upon the lines run by the engineers, with a view of locating the Naples branch of the Northern Cross railroad, do hereby certify that we have duly examined the line first run by John Von Horn, and believe the damage that will be done to the land, over and above the advantages to be derived from the road passing over said land, to be (seven thousand dollars) $7,000. Owing to the fact that we have not as yet been able to ascertain the names of the different owners, we are unable now to make a detailed report of the names of the owners and the damage of each; but if that line shall [be] selected, we will ascertain the names of the owners, and make a detailed report hereafter.

JOSEPH CODDINGTON,
CHARLES KENNEY,
ORLANDO KELLOGG.

To M. McConnel,
Commissioner Board of Public Works.

NAPLES, ILL., *July* 26, 1838.

SIR: We, the undersigned, having been selected and sworn, as appraisers to assess the damages upon the lines run by the engineers, with a view of locating the Naples branch of the Northern Cross railroad, do hereby certify that we have duly examined the line last run by Francis G. Murray, and believe the damage that will be done to the land over which the same passes, over and above the advantages to be derived to the owners of said land by the construction of said road over the same, to be five thousand dollars, ($5,000.) But owing to the fact that we have not as yet been able to ascertain the names of the different owners of each of the different tracts, we are unable now to make a detailed report of the names of owners and the damage to each; but if that line should be selected, we will ascertain the names of the owners, and make a detailed report hereafter.

JOSEPH CODDINGTON,
CHARLES KENNEY,
ORLANDO KELLOGG.

To M. McCONNEL,
Commissioner Board of Public Works.

Estimate of the two lines run for the Naples branch, made by the engineer (Mr. Murray) who made the survey made at the request of the Commissioner of the first circuit.

Estimate of the probable cost of the Naples branch of the Cross railroad, (as at present located,) via the route of the Naples and Jacksonville railroad.

SECTION No. 1.

8,759 cubic yards embankment, from 1 to 30, at 20 cts.	$1,751 80
8,995 cubic yards do. from 30 to 50, at 30 cts.	2,698 50

Superstructure.

Bridge across slough, 45 lineal feet, at $12	540 00
One cross drain, 16 perch, at $6	96 00
Abutments for bridge, 56 perches masonry, at $6	336 00
Taking Wolf run south of line, 400 cubic y'ds excavat'n, at 17 cts.	68 00
Total cost of section No. 1	$5,490 30

SECTION No. 2.

13,563 cubic y'ds embankment, at 17 cts.	$2,305 71
1,979 cubic y'ds excavation, at 17 cts.	336 43
Two culverts, 34 perch, at $6	204 00
Total cost of section No. 2	$2,846 14

Superstructure.

3.86 miles, including cost of materials and laying, at $3,224 per mile	$12,444 64
90 tons iron, at $60	5,400 00
1 turn-out	800 00
Total cost	$18,644 64
Section 1, total cost	$5,490 30
Section 2, do.	2,846 14
Superstructure, &c.	18,644 64
	26,981 08
Add 5 per cent. for contingencies	1,349 05
	$28,330 13

N. B. In the foregoing estimate nothing is allowed for the right of way, or for land for depots, &c. as all has been donated free of cost.

Estimate of the probable cost of the Naples branch of the Northern Cross railroad, route No. 2.

13,657 cubic yards embankment, at 17 cents	$2,321 69
10,289 do. excavation, at 30 cents	3,086 70
5,545 do. do. double track, at 30 cts.	1,543 50
Superstructure for bridge, 20 lineal feet, at $12	240 00
Abutments for bridge, 41 perch, at $6	246 00
Culvert, 16 perch, at $6	96 00
	$7,533 89
2.708 miles superstructure, at $3,224	8,730 59
592 tons iron, at $60	3,570 00
One turn-out	800 00
	$20,634 48
Add 5 per cent. contingences	1,031 72
Total cost of line No. 2	$21,666 20

N. B. The assessments of the right of way is applicable to this line as made by appraisers under oath. No lot or land is estimated for a depot, as none was wanted, said line not being adopted.

Copy of a resolution passed by the Board of Commissioners of Public Works.

DECEMBER 8, 1837.

The President of the Board offered the following resolution, which was adopted:

Resolved, That the acting Commissioner of the first judicial circuit be authorized to cause a survey for a lateral route from the main line of the Northern Cross railroad, at the most eligible point on said road to the town of Naples, on the Illinois river; and that a report of said survey be made to the Board at its next meeting, and that said report contain all information necessary to enable this Board to determine the propriety of constructing a lateral way to said town: *Provided*, That the point of commencement upon said Northern Cross road shall not exceed five miles from said town.

CENTRAL OFFICE,
Vandalia, January 31, 1839.

I certify the above to be a true copy from the journals of the Board of Commissioners of Public Works.

WILLIAM PRENTISS,
Secretary of the Board of Public Works.

JUNE 6, 1838.

On motion of Mr. Willard,

The following preamble and resolutions were adopted:

Whereas the committee from the town of Naples, in Morgan county, has presented the application of the inhabitants thereof for a lateral branch to said town from the Northern Cross railroad, and has made it fully appear to the satisfaction of the Board, that said lateral branch will not exceed four miles in length, over almost a level plain; and that said town is an important trading town within the meaning of the 33d section of the law in relation to internal improvements; from all of which facts, the Board is satisfied that it is to the advantage of the State to extend said branch to the town: and whereas it has been further ascertained that the Jacksonville and Naples Railroad Company has the power by law to make a railroad from the town of Naples to Jacksonville through Wolf run; and that the Northern Cross State railroad has been located and is now nearly completed over the same ground; and that said company has not relinquished their right to occupy the same ground: and whereas it has been ascertained that the citizens of said town will construct said road at the bare cost of the work and materials, and that the Naples Railroad Company will relinquish all claim to the State of Illinois without any compensation whatever; It is therefore,

Ordered, by the Board of Public Works, That the Commissioner of the first judicial circuit be directed to cause the engineers to locate said lateral branch in a manner that shall best comport with the interest of the State, and then proceed to advertise and put the same under contract according to law, and that the same be paid for out of the appropriation for the Northern Cross railroad: *Provided* the same shall be bid for and taken as low or lower than the estimates of the State engi-

neers, to be made before said road is let to contract: *And provided*, That the Naples and Jacksonville Railroad Company shall first relinquish all rights as aforesaid, except that the said company shall first be bound to surrender to the State the work already done upon said road without a reasonable compensation.

Mr. Willard laid before the Board a communication from the citizens of Shawneetown relative to the eastern termination of the Alton and Shawneetown railroad.

Ordered, That said communication be filed and preserved.

On motion of Mr. McConnel,

Ordered, That the acting Commissioner of the third judicial circuit be authorized to prolong section No. 1 of the Alton and Shawneetown railroad along the river front of the borough of Shawneetown, from the State lots at the mouth of Fourth South street up to the commons opposite First and Second North streets, the work to be done by the present contractor for such section No. 1, and to be paid for at the estimate of the prinpal engineer, as provided for in cases of other extra jobs, and also provided for under his contract.

CENTRAL OFFICE,
Vandalia, January 31, 1839.

I certify the foregoing to be a true copy from the journals of the Board of Commissioners of Public Works.

WILLIAM PRENTISS,
Secretary of the Board of Public Works.

Copy of the affidavit of James M. Bucklin, filed in the circuit court of Morgan county, in the cause of the president and trustees of the town of Jacksonville against Murray McConnel, Thomas T. January, and James Dunlap.

STATE OF ILLINOIS, *Morgan County.*

The president and trustees of Jacksonville vs. *Thomas T. January, James Dunlap, and M. McConnel.*

Personally came James M. Bucklin before me, the undersigned, justice of the peace in and for said county, and made oath that he is principal engineer of the western engineering district of the State of Illinois, and that the Northern Cross State railroad, as now located between the Illinois river and Springfield via Jacksonville, was located under his immediate direction and control; and he has thoroughly examined and is fully acquainted with the country, and with the general surface thereof, east and west of Jacksonville, and on each side of the line of said road; and that he has no hesitation [in saying.] that said road, as the same is now located, both east and west, and through Jacksonville, is upon the cheapest and at the same time the best route, and one combining more advantages of straight line and level grade than any other line that could be found that should pass via Jacksonville. Said Bucklin further says

that the defendant in the foregoing suit in chancery, McConnel, Commissioner of the Board of Public Works, under whose charge and supervision said road is being constructed, never did to his knowledge use any threats, persuasions, or other means whatever with him, as engineer, or with any person within his knowledge, to enforce or cause the location of said road, either at Jacksonville or any other place, to be made otherwise than on the route best suited to the interest of the State and advantage of the said road.

J. M. BUCKLIN.

Sworn to and subscribed, this 11th day of July, 1838.

GEO. REARICK, *J. P.*

STATE OF ILLINOIS, *Morgan County*, ss.

I, Dennis Rockwell, clerk of the circuit court of said county, do hereby certify that the foregoing is a true copy of the affidavit of James M. Bucklin, filed in said court in the cause of the president and trustees of the town of Jacksonville vs. Murray McConnel, acting Commissioner of the Board of Public Works for the first judicial circuit, Thomas T. January, and James Dunlap, as fully and completely as the same remains on file in my office.

[SEAL] Given under my hand and the seal of said court, at Jacksonville, this 20th day of January, A. D. 1839.

DENNIS ROCKWELL, *Clerk.*

Copy of the affidavit of Frederick Hawn, filed in the circuit court of Morgan county, in the cause of the president and trustees of the town of Jacksonville against Murray McConnel, James Dunlap, and Thomas T. January.

STATE OF ILLINOIS, *Morgan County*, ss.

The president and trustees of Jacksonville vs. *M. McConnel, January, and Dunlap.* } In Chancery.

Personally came Frederick Hawn before me, the undersigned, clerk of the Morgan county circuit court, and after being duly sworn, deposeth and says that he has been engaged for the last year or about that time in the duties of senior assistant engineer, under the direction of M. McConnel, one of said defendants, as Commissioner of the Board of Public Works of the State of Illinois, and under the direction of James M. Bucklin, principal engineer; and that during a great part of said time he has been employed in locating, and assisting to locate, the Northern Cross railroad from the Illinois river to Jacksonville; he has also been engaged in assisting to locate said road through Jacksonville, and for some distance west and east of said town. He further says that he is fully acquainted with the country, and general surface thereof, both east and west of said town, and through said town; and that he has no hesitation in saying that the present location of said road through the northern

part of said town is the best location that could be found, either east or west, or through said town, and one combining more advantages for economy, straight line, and level grade, than any other line that can be found for said road, that shall pass via Jacksonville. Said Hawn further says that, during the performance of said duties as engineer, he has been in constant intercourse with said McConnel, and in consultation with him in relation to the public works; and he, the said Hawn, says that said McConnel never did, either directly or indirectly, attempt to influence him, said Hawn, or any other engineer, to his knowledge, to locate said road either in one place or another, but at all times expressed a wish that said road, both at Jacksonville and elsewhere, should be located to the best interest of the State, and the future operation of the said road to the best and most useful effect, as well at Jacksonville as elsewhere; and further the said Hawn saith not.

FREDERICK HAWN.

Sworn to and subscribed before me, this 16th day of July, A. D. 1838.
DENNIS ROCKWELL, *Clerk.*

STATE OF ILLINOIS, *Morgan County*, ss.

I, Dennis Rockwell, clerk of the circuit court of said county of Morgan, do hereby certify that the foregoing is a true copy of the affidavit of Frederick Hawn, filed in said court, in the cause of the president and trustees of the town of Jacksonville vs. Murray McConnel, James Dunlap, and Thomas T. January, as fully and completely as the same remains on file in my office.

[SEAL.] Given under my hand and the seal of said court, at Jacksonville, 20th day of January, A. D. 1839.
DENNIS ROCKWELL, *Clerk.*

Mr. [illegible]. S. Wilkinson submitted the following testimony, which, after having been read, sworn to, and subscribed by Mr. Wilkinson, was received by the committee, and ordered to be copied.

Question 1: Were you ordered by Mr. Bucklin to assist in locating a route for the Naples branch railroad?

Answer: I was.

Question 2: Was there not several routes surveyed for said branch; and which was, in your opinion, the best?

Answer: There were two routes surveyed for the said branch; and, merely as a branch, I consider the shorter one the best.

Question 3: Did you not make or assist in making all the estimates and calculations relative to said branch surveys, and the plans and profiles relative to the same?

Answer: I assisted in making the calculations for the Naples branch, on both the routes, and made a map of the surveys.

Question 4: Describe the location of the short branch recommended by Mr. Bucklin.

Answe r: The route recommended by Mr. Bucklin commenced on the Northern Cross railroad west of Dixon's lake, and ran in a southwest direction for the distance of about one mile, (making an angle with a due east and west line of about 19 deg. I think;) thence on a half section line to the Illinois river. The whole distance is over two miles and ahalf.

Question 5: Did the short branch pass though any improved land or town lots?

Answer: Said branch passed through no improved land, and over no town lots according to the plat of the town of Naples which I saw.

Question 6: Do you recollect the cost of the short branch, and cost of the branch at present under contract?

Answer: The estimate of the short route I think was about $18,000, and that of the longer one near twice that amount.

Question 7: Did not McConnel direct you to make your estimates for said branch agreeably to the estimates of Mr. Bucklin for work done on the Jacksonville and Naples railroad?

Answer: He did.

Mr. William Pollock offered the following testimony in writing, which after having been read, sworn to and subscribed by Mr. Pollock, was received by the committee, and ordered to be copied.

Question 1: Were you informed by Mr. McConnel whether the Jacksonville and Naples Railroad Company had a claim to the right of way through the valley of Wolf run previous to your report to him recommending the location of the Northern Cross railroad through the valley of Wolf run?

Answer: I was not.

Question 2: Had you been informed of the intention of said company to demand from the State the construction of a branch railroad and appendages to the town of Naples as at present located and under contract, and that said company would exact of the State pay for work already done on their old road as indemnity for the right of way which said company claims through the valley of Wolf run, and now occupied by the Northern Cross railroad, is it probable you would have recommended the location of the Northern Cross railroad through the valley of Wolf run?

Answer: It is probable that, if the expense now accruing to the State from the Naples branch and its appendages had been taken into consideration when the estimate of the cost of Wolf run route was made, the comparative result would have been in favor of a shorter route.

Question 3: Where was the original termination of the Northern Cross railroad at Meredosia?

Answer: On the bank of the river opposite the point of an island above the ferry.

Question 4: Did you locate and prepare for execution any part of said road in Meredosia? If so, describe, particularly, the part so located, and the street upon which said railroad was laid out.

Answer: I located the road through Meredosia, by commencing at the point designated in my answer to No. 3; and making a curve of 500 radius to the right which was extended to the centre of Washington street, a distance of about 5 or 600 feet; thence a tangent was run through the centre of said street, and continued for a distance of upwards of four miles nearly due south. I also laid out a short portion of the road so located for constructing in Washington street near the commencement or northern extremity of said tangent. At the time I prepared this portion of the said road for construction, I did not consider the road as permanently located in Washington street, as it was a route

of my own choosing, and had not the sanction of the chief engineer. My object in staking it out for excavation and embankment was that, provided the location was approved of, the contractors might have an opportunity of commencing work without calling me from other duties when remote from that place.

Question 5: Did you ever hear of any other terminus for said road in Meredosia, than that near the island north of Main street, previous to fixing the present termination near Finch's tavern?

Answer: I did not hear of any other terminus until late in the fall. I heard Mr. Bucklin suggest the propriety of shortening the route by making the terminus lower down the river, and I was directed to lay out work on the road so far south of the town, that, if such a change was made, no work would be lost.

Question 6: When you located said road through Washington street, Meredosia, did you not consider said location a permanent location to the approval of the principal engineers?

Answer: I did.

And the committee then adjourned until to-morrow evening at half past 6 o'clock, P. M.

WEDNESDAY, February 6, 1839, 6½ o'clock.

Committee met.

Present: Messrs. Gatewood, Browning, Hacker, and Richardson, of the Senate; Hardin, Robinson, Roman, and Thornton, of the House.

An order was made for the following railroad contract and relinquishment at the Auditor's office, which were read and ordered to be copied.

Contract.

This agreement, made and concluded this fifteenth day of August, in the year of our Lord one thousand eight hundred thirty-eight, between Charles Collins and Miron Leslie, of the county of Morgan, and State of Illinois, parties of the first part, and the Board of Commissioners of Public Works of the State of Illinois, by M. McConnel, acting Commissioners of said Board for the first judicial circuit, on the part of and behalf of the State of Illinois and the people thereof, of the second part, witnesseth that the said Collins and Leslie, parties of the first part, for and in consideration of the money to be paid to them by the party of the second part, in the manner and time hereinafter mentioned, hereby contract, covenant, and agree to construct and complete, in a good, substantial, and workmanlike manner, all the part of the public work hereinafter specified, to wit, the Naples branch of the Northern Cross railroad of the State of Illinois as authorized, ordered, and directed by said Board, reference being had to the location, maps, profiles, and specifications of the said public work made by the engineers for said State, and remaining on file in the office of the said Board of Public Works, agreeably to the following plan, that is to say: the work shall be done according to the plans, directions, and specifications for the Northern Cross railroad office at Jacksonville; reference being thereunto had for the directions as to said work, and for more certainty as to the manner and mode

of doing the same; and they agree to do the same according to the directions of the Commissioner of said circuit, or according to the directions and orders of the engineers in the charge of the work. It is further agreed by and between the parties, that the said parties of the first part shall build and construct all the necessary buildings for a depot, for engine-house, and all other things necessary and proper for said public works, according to the plans and specifications to be furnished them, and according to the directions of the engineer, the Commissioner, or any authorized agent of the State. The said parties of the first part further agree to convey, or procure to be conveyed, freely and without charge (except the sums to be paid them for the construction of the road as hereinafter specified) the right of way for said Naples branch over all the land owned by either or both of them upon which any part of the Northern Cross railroad may be located. They further agree, for the same consideration aforesaid, to procure to be conveyed to the State of Illinois, by deed in fee simple, the lot of land or part of the fraction on the Illinois river in front, and at the termination of said branch, bounded eighty feet on Water street and the Illinois river, and also a lot 30 by 80 back from the river, whereon to erect an engine-house. They further agree to procure all the rights of the Jacksonville and Naples Railroad Company to be relinquished to the State of Illinois forever.

And the said Collins and Leslie further contract, covenant, and agree to construct the work above mentioned, and every part thereof, agreeably to the aforesaid description, plans, and specifications, and under the immediate examination and careful inspection, and agreeably to the orders and directions of the acting Commissioner on the line for the time being, and of the engineers and superintendent appointed to examine, inspect, and direct the same: *Provided*, *however*, That they will from time to time, and at all times during the progress of the work, conform to any alteration in the line of the said railroad, either vertically or horizontally, and to any change or alteration in the location, plan, form, dimension, or manner of constructing said railroad, or of any mechanical structure thereon, which may be prescribed or directed by the acting Commissioner, engineer, or superintendent on the said work; which directions shall in all cases be made in writing; it being mutually agreed and understood, that whenever any of the different kinds of work, or the quantity and expense of materials shall be increased or diminished by conforming to any alteration directed to be made in writing as aforesaid, the quantity or amount of such increase or diminution of any or of all the kinds of works herein specified, or of materials necessary to construct the same, shall be estimated by the engineer in charge of the work; and the sum to be paid to said contractor shall be increased or diminished accordingly, agreeably to the rates and prices herein specified to be paid for the same. And the said parties of the first part further contract and agree that they will construct and complete, in a good and workmanlike manner, under the direction of the acting Commissioner or engineer on the work, any other items of work that may necessarily occur on the said railroad, and which are not embraced in the aforesaid descriptions and specifications, when thereunto directed by the acting Commissioner or engineer; and that such extra work shall be estimated by the engineer, both as to quantity or amount, and price, and be

paid for accordingly. And it is further understood and expressly agreed between the parties, that the said parties of the first part will make an efficient commencement of the work embraced in this contract within thirty days from the date hereof, and will have the same, and every part thereof, fully completed according to this contract, and ready to be delivered up, and will deliver up in said finished condition, on or before the first day of June, in the year A. D. 1840.

And it is further expressly agreed and understood that, if the said parties of the first part shall neglect or refuse to make a full commencement of this contract within the time above limited for commencing the same, or at any time thereafter shall neglect or refuse to prosecute this contract with an assiduity and efficiency that shall give a reasonable assurance to the acting Commissioner and engineer of its uniform progress and final completion within the time above specified for the completion thereof; or if the said parties of the first part shall, in the opinion of the principal engineer in charge of the work, perform the work imperfectly, and shall neglect or refuse to remedy such imperfect performance, in either or all of such cases, the acting Commissioner on the work may declare the contract to be abandoned on the part of the contractor, and may forthwith proceed to relet the work embraced in this contract, without the let, hindrance, or disturbance of said parties of the first part, or of any person or persons claiming to act for or under them. And further, that the said contractor shall not sub-contract the work comprised in this contract or any part thereof, without the consent of the Board of Public Works, but shall personally superintend the work during its progress; and in cases of such sub-contracting, the acting Commissioner may, on the part and behalf of said Board, declare this contract forfeited and abandoned. And in case of the abandonment of this contract for any of the causes above mentioned, it is agreed that all the retained per centage thereon shall be forfeited to the use of the State. And to prevent all disputes and misunderstanding, and whereas it is necessary that the said work shall be inspected and received, it is mutually agreed by and betwen the said parties, that the principal engineer of the said district, for the time being, in which the said works are situated, or some other competent engineer, to be designated by the acting Commissioner, shall be the inspector thereof, and shall be the arbiter in all cases of disputes and misunderstandings arising under this agreement, whose decision thereon shall be final and conclusive. And the second party of the second part hereby covenants and agrees to pay the said parties of the first part, in consideration of the true and faithful performance of this contract and every part thereof, by and on the part of said parties of the first part, and as a full complete compensation for such performance, and for the completing of this contract according to the true intent and meaning thereof and within the time specified, the following rates or prices for the work executed; that is to say: For section one, commencing in Wolf run, from station one to station thirty, 20 cents per cubic yard for embankment. From station thirty to station fifty, 40 cents per cubic yard for embankment: For section two, towards and next to the Illinois river, for all embankments between stations fifty and seventy, 35 cents per cubic yard. For all embankments between stations seventy and one hundred and two, 17 cents per cubic yard.

For all excavations upon any station upon either of said sections, the same price is to be allowed as for embankment. For all masonry for bridges, not dressed, $6 per perch of twenty-five cubic feet per perch. For all masonry in culverts, $8 per perch. For all rip-rap protection walls, $4 per perch. For all masonry for foundation for buildings, laid in lime mortar and not dressed, $8 per perch. For all dressed or cut-stone work, $1 per foot, in addition to such prices, measuring the actual surface of the dressed work only. For all buildings, the said parties agree to receive for the brick and wood work the prices allowed and estimated by the engineer at the time the work is done or being done; and they agree to do the same in relation to all bridges to be built, except the masonry. They agree to furnish all the materials and lay down the superstructure of said branch ready to receive the iron, and to lay down the iron (except the turn-outs,) for twelve thousand four hundred and forty-four dollars and sixty-four cents.

But it is agreed by the parties of the first part, that the engineers may, and they will keep an accurate account of the cost of all of said work, and they will receive the same therefor, if it shall fall short of the price before mentioned as heretofore proposed by them. And it is mutually agreed between the parties that, during the progress of the work, estimates shall be made thereof and payments made by the acting Commissioner on account of the same, in the manner provided for in the seventeenth section of the law of Illinois, entitled "An act to establish and maintain a general system of internal improvement," and in no other manner whatever. And that whenever, in the opinion of the principal engineer in charge of the work, (who is also inspector of the work, as is above agreed and understood) the work comprised in this contract shall have been fully completed according to the terms, and within the time specified in the agreement, the said engineer and inspector shall certify the same to the acting Commissioner on the work for the time being, with an estimate of the full amount and value of the work executed; and within sixty days thereafter, the full amount of the contract shall be paid to the said party of the first part according to the said estimate and to the rates and prices hereinbefore specified, deducting the amount paid upon the estimates which shall have been made during the progress of the work, as aforesaid. And it is further agreed and understood, in order to prevent the possibility of unnecessary damages being done to proprietors of land, that the places are to be designated by the acting Commissioner or engineers from which the embankment herein contracted for is to be procured; and, in removing the same, care is to be taken by the said contractor to disfigure as little as may be practicable the lot, or field, or piece of ground from which such earth or other material is removed. And it is further agreed that, to avoid disputes as well as interruption and hindrance to the regular and peaceable progress of the different parts of the public works, and to prevent unnecessary injury to the rights and property of the neighbors in the vicinity of the works, or to persons travelling on or near the line of said works, the acting Commissioner, or any engineer or superintendent on the work shall and may dismiss from the service, by whomsoever employed and engaged, every quarrelsome, disorderly person, and such as shall be addicted to habits of intemperance, or who shall wantonly commit any trespass, either upon

the person, land, or property of citizens or others, living, travelling or working upon or near the work of the said railroad, or be guilty of other offensive misconduct; and that the said contractors shall dismiss all similar persons employed under them, whenever thereto directed by the acting Commissioner, engineer, or superintendent, and shall not, knowingly, employ any such person who may have been so dismissed from other parts of the public works in this State.

[A copy of the said proposal referred to in this contract is hereto attached, marked A, and made a part of this said contract.]

In testimony whereof, the said parties of the first part, and the said Murray McConnel, acting Commissioner on the part and behalf of the Board of Commissioners of Public Works of Illinois, on the part and behalf of the State of Illinois, and the people thereof, have hereunto set their hands and seals, the day and year first above written.

MIRON LESLIE, [L. S.]
CHARLES COLLINS, [L. S.]
M. McCONNEL. [L. S.]

A.

Copy of the proposals referred to in the foregoing contract.

NAPLES, *August* 14, 1838.

To MURRAY McCONNEL,

Commissioner of the Board of Public Works, &c.

SIR: We, the undersigned, hereby propose to make the Naples branch of the Northern Cross railroad at and upon the following terms and conditions, to wit: We are the owners of the stock and have the control of the Naples and Jacksonville Railroad Company; and under the chartered privilege of said company, we have done a large amount of work towards completing a railroad over the ground fixed for the said lateral branch. We, as individuals, are the owners of a large quantity of land over which said branch will pass, and over which the Northern Cross railroad from Meredosia to Jacksonville now passes, the right of way over and upon which has never been relinquished to the State. We are also the owners of the land at the river termination of said branch road, suitable for a depot, and for all necessary buildings that may be needed by the State. We look upon the making of the road from the town of Meredosia to Jacksonville, by the State, as an unwarrantable violation of the chartered privilege of said Railroad Company; yet nevertheless, we propose, for the purpose of settling all difficulties, to surrender all the chartered rights of said company; to surrender, and procure to be surrendered, the right of way for said branch road over all the land over which the same may be located. We propose to surrender the right of way over all our land over which the Northern Cross railroad passes. We propose to donate a sufficient quantity of land for all necessary buildings at the river termination of said branch road, and to procure the land to be given or donated to the State. All of which rights thus proposed to be surrendered, we believe would be

estimated (at a low valuation) to the sum of $35,000; but which we agree to surrender to the State freely and without charge; yet upon this condition, that said branch road shall be made by the State over the line of the road now located and partially constructed by the Naples and Jacksonville Railroad Company, and that said company be paid for the work actually done and the materials furnished by said company, at such a sum of money as the State engineer shall estimate the same to be worth: *And provided, also,* That the following proposal for constructing said branch road be accepted, to wit: We agree to construct said branch road and furnish all the materials therefor (iron excepted,) at the present estimate of the engineers now made for said work, and all the necessary buildings, side-tracks, and turn-outs. Yet if it shall be found upon future estimates of the State engineer, as the work progresses, that the estimates now made are higher in price than the actual cost of the work, then the same may be reduced to the actual cost of the work without any charge for the time, trouble, and risk of doing the same. We further agree that the State may furnish the iron, or we will furnish it, charging the bare cost of the same, when delivered.

MIRON LESLIE,
CHARLES COLLINS.

Relinquishment.

STATE OF ILLINOIS, *Morgan County*, ss.

We, the undersigned, president, trustees, and stockholders in the Naples and Jacksonville Railroad Company, the charter of which was granted by the Legislature of the State of Illinois at the last general session thereof, do by these presents, for and in consideration of the sum of one dollar to each of us paid by the State of Illinois, grant, relinquish, and release to the State of Illinois all and each of our several rights to all the shares of the stock of said company, and to the said charter, and to every thing growing out of it in the form of rights vested or to be vested, either to make a railroad or to do any other act or to enjoy any other privilege whatever: *Provided, however,* That this release and every thing in relation thereto is upon the condition that the State of Illinois shall make or cause to be made a good and durable railroad on this line where said company is now constructing said road, from the said town of Naples to intersect the Northern Cross railroad at the most eligible point in the valley of Wolf run mentioned in said charter, and within five miles of said town of Naples; *And provided further,* That said road shall be erected within nineteen months from this date, together with all the necessary turn-outs, engine-houses, ware-houses, building for depots at said town of Naples and elsewhere: *And provided,* That the said Naples company shall be paid for the work done and materials furnished upon said road, all of which is hereby transferred to the State of Illinois. This release is to be and remain in full force for the term of nineteen months from this date; and if the condition aforesaid shall be then fully complied with, then the same shall be absolute, and operate as a release forever; otherwise to be and remain null and void; and the said company shall have full power to enter immediately upon the land, and construct said road

and enjoy all the rights and privileges properly belonging or appertaining to said company, in as full and complete a manner as though this release had never been made. In testimony whereof, we, the undersigned, have hereunto set our hands and affixed our seals, this fifteenth day of August, A. D. 1838.

MIRON LESLIE, *President.*	[L. s.]
MARK W. DELAHAY,	[L. s.]
GEO. M. RICHARDS,	[L. s.]
A. W. PARSONS,	[L. s.]
K. LODWICK,	[L. s.]
ORLANDO KELLOGG,	[L. s.]
JOHN MANCHESTER,	[L. s.]
H. W. VANSYCKEL,	[L. s.]
JESSE McKEE,	[L. s.]
BOZABEL GELATT,	[L. s.]
CHARLES COLLINS.	[L. s.]

Mr. James E. Waldo, who had been previously sworn, produced his additional testimony in writing, which was read to the committee.

Mr. McConnel objected to receiving the answers of James E. Waldo as testimony.

Mr. Browning moved to reject a part of the first answer of Mr. Waldo, which was carried.

Mr. McConnel made objection to Mr. Waldo's answer to fifth interrogatory.

Mr. McConnel withdrew his objection.

Mr. Thornton moved a reconsideration of the vote of the committee by which the committee had determined not to investigate the second specification of the first charge, which was withdrawn, and it was resolved that Mr. Waldo's entire answers should be received by the committee; whereupon they were ordered to be copied.

Question 1: Do you know any thing respecting the location and termination of the Northern Cross railroad at Meredosia, as the same was let to contract in July, 1837 ?

Answer: I know that sometime previous to the tenth of July, 1837, the day on which the contract was let, there were a number of experimental lines run, all of which terminated near the point of the island, north of Main street; and that between the tenth of July and the first of August, after Wm. Pollock located a line commencing about three hundred feet north of Main street in Washington street, and running south down Washington street, Mr. Pollock ran a curved line from this commencing point round the outlet of the lake opposite the island.

Question 2: Did the said railroad pass through Cobb and Aylesworth's addition to the town of Meredosia; if so, through what street ?

Answer: The road passed through Cobb and Aylesworth's addition, and through Washington street.

Question 3: Did the contractors do work on said road through said addition ?

Answer: They did.

Question 4: When was said work done, and when commenced?

Answer: It was commenced on the first day of August, 1837. It was commenced in Washington street north of Main street, in station No. 1 opposite the island.

Question 5: Did McConnel ever converse with you respecting the location of said road through Cobb and Aylesworth's addition, and about the original termination, and what did he say?

Answer: I have had several conversations with McConnel respecting the location as made by Pollock. One evening shortly after the location was made, Mr. McConnel told me in Jacksonville that Pollock made that location by his (McConnel's) order. McConnel told me that Pollock asked him where he should commence the location in Meredosia, and McConnel said he replied, "by God, stop it into the old place." About the 10th of March, 1838, I had another conversation with McConnel on the subject, in which I told him of rumors that were afloat that he was determined to change the location from the upper to the lower part of the town in Meredosia, but he assured me that he never had such an idea; and he asserted during the conversation over and over again that no change should be made. Another conversation took place in the recorder's office after the location was changed, in which conversation he asserted frequently that the change was made without his consent, knowledge, or approbation. One statement in particular I reccollect of his making at the time nearly in the following words: "that the road had been located to the upper part of the town; that it had been marked to the upper part, and that the State had paid for that mark, and that by God the location was not changed yet; he would learn contractors to be contractors and commissioners both."

Question 6: Were either of the contractors present when the work on the railroad through said addition was commenced?

Answer: James Dunlap was present.

Question 7: Did you ever write a letter to Mr. McConnel containing certain propositions of yours to said McConnel about lots for a depot?

Answer: I wrote McConnel a letter I think in August, 1837.

Question 8: State the substance of said letter.

Answer: The substance as near as I can recollect was urging him to stand up to a contract he made with me on the eleventh day of July previous; in which contract he urged that, if I would take back four lots he had bought of us and give him up his note, he would have them appraised for the use of the State; and in order to insure my getting a good price for said lots, he agreed to select a man and let me select another, and whatever price they agreed on he would take them at; he said it was not absolutely necessary to have them appraised at all; he could take them without any appraisement, but it would look better to have them appraised; but after he had got the contract recorded he constantly kept deferring the appraisement, never appeared to be ready; therefore I wrote him a letter urging him to stand up to his bargain and as near as I can recollect, about the close of the letter I said to McConnel that if the four lots he had agreed to take were appraised at a good price he should have the four lots adjoining for what fees we owed him.

Question 9: What was your object in writing said letter?

Answer: My object was to induce him to do as he had agreed to do.

Question 10: Does any of the property purchased from you by Mr. Connel, described in Duncan's bond, and referred to in McConnel's obligation, lie on Washington street, in Cobb & Aylesworth's addition?

Answer: Lot 14 in block No. 7, and lots No. 8 and 12 in block No. 12, in Cobb & Aylesworth's addition to the town of Meredosia, lie on Washington street, and immediately on the line of the railroad as located by Mr. Pollock.

Mr. Leslie interrogated.

Question 1: State what you know about the matter of Collins and Gov. Duncan's agreement in relation to the Meredosia Railroad Company.

Answer: There existed, several years since, an act of incorporation for the construction of a railroad from Jacksonville to Meredosia. Sometime in 1836, Charles Collins and Gov. Duncan had an interview in relation to making a railroad from Jacksonville to Naples and Meredosia. Under the Meredosia charter an agreement to some extent was by them entered into to make a road to Naples and Meredosia. No agreement was made, to my knowledge, where the two roads were to unite. There was a nominal subscription made on the Meredosia and Jacksonville books, by Collins, and I believe that I also subscribed for stock, but I am not certain. The object of Collins' subscription and mine was, that in case any thing was done toward making the road, we would determine the place of junction to suit ourselves. There was a meeting of the parties concerned, and at that meeting Mr. McConnell acted for Mr. Collins. A disagreement took place at this meeting, and the whole matter blew up. Mr. McConnel had no interest in the matter that I know of. I know there was no connection between McConnel, Collins and myself—whether McConnel said he had an interest or not, I have no recollection; there was no money paid on the subscription to my knowledge, and no further property in the matter than what grew out of barely subscribing names upon the book. At this time there did not exist any such company as the Naples and Jacksonville Railroad Company.

Mr. Bucklin interrogated. Mr. Hardin's first question to Mr. Bucklin was objected to by Messrs. Hacker and McConnel.

The ayes and noes were called for by Mr. Hardin: On the question, "Shall question No. 1, be answered?"

Those voting in the affirmative, were

Messrs. Thornton, Hardin and Browning—3.

Those voting in the negative, were

Messrs. Roman, Richardson and Hacker—3.

Under rule No. 6, heretofore adopted by the committee, the question No. 1 was ordered to be answered.

Mr. Richardson moved to rescind rule No. 6; which was withdrawn.

Mr. Thornton moved the further examination of Mr. Bucklin be suspended until the committee were all present; which was lost.

Whereupon the committee proceeded to examine Mr. Bucklin.

Question 1: Did Mr. McConnell ever pay you for your services or other claims against the State, in promissory notes? If so, state whether the State or yourself has, either of you, lost any thing by your taking the notes.

Answer: Mr. McConnel did pay me in promissory notes—I have lost the use of part of the money—the State has sustained no loss.

Question 2: When was the agreement made to take said notes in place of cash? State the amount of the notes you took, and whether you have collected all said notes yet.

Answer: I think it was some time last winter—the amount was I believe about $500; all the notes have been paid excepting one of $100, which bears 12 per cent. interest, and which Mr. McConnel assured me was secured by mortgage.

Question 3: Were the notes assigned by Mr. McConnel?

Answer: I considered Mr. McConnell responsible for the amount of the notes; but I do not recollect whether they were endorsed by Mr. McConnel; I believe they were.

Question 4: What excuse, if any, did McConnel make for offering notes in place of money, in discharge of your claim and the property sold to the State?

Answer: My recollection of the conversation that took place is imperfect; but my impression is that he gave as a reason the want of ready money.

Question 5: Do you know any instance of McConnel's paying creditors of the State promissory notes, when he had cash belonging to the State in his hands?

Answer: I know of one instance in which Mr. McConnel paid an engineer promissory note or notes, but I cannot say whether he had money at that time, belonging to the State, in his hands or not.

Question 6: State the times and conditions of the agreement about your taking the notes, and all that took place in relation to this matter, and whether the notes taken by you were due or not due; and if not due, whether any discount was allowed you on the notes to make them equal to cash.

Answer: I had frequently applied to McConnel to allow my account, which he declined adjusting. But on one occasion, he said he would allow them on condition that I would take "cash notes." The notes were due at the time, and there was no discount allowed on them in any way.

Question 7: Have you any knowledge of McConnel's allowing additional compensation in consequence of payment being received by any person in promissory notes, or that payment in such notes had any effect in increasing the rates of charges for services?

Answer: I have no such knowledge.

Question 8: You have testified that a route might have been formed for the railroad from Jacksonville to Meredosia at a 50 foot grade, about three miles shorter, and about $100,000 cheaper than the route by Wolf run; state where the short route would have passed through the bluff's.

Answer: Through Davis' branch.

Question 9: If the railroad had been made through either the valleys of Davis' branch, or Raccoon run, would it have approached within 5 miles of Naples?

Answer: No.

Mr. John Von Horn, being duly sworn as a witness, was interrogated as follows:

Question 1. Did Mr. McConnel ever make any payment to you in promissory notes, for services rendered by you to the State? If so, state all about the transaction.

Answer: Mr. McConnel paid, in the fall of 1837, three notes to the amount of $85 to me, which I had given when in the service of the Naples and Jacksonville Railroad Company. These notes were given by me under the impression that they were certificates to certain individuals in Naples, for value rendered to the railroad company. I had not written them myself; was then unacquainted with the English language, but only signed them when presented to me. In settling with Mr. McConnel he paid these notes to me as a part of my salary; and on my objecting to it, Mr. McConnel told me that I might consent or not since he was in possession of the means to make me pay them. I do not know that Mr McConnel was present when I gave said notes. I am under the impression that I informed Mr. McConnel all about the circumstances by which these notes were obtained from me, and I also positively stated to him that I did not think myself obliged lawfully to pay these notes. The above notes were given to Mr. Hawse, tavern-keeper at Naples, two of them at least.

Question 2: Did not McConnel state to you, at the time those notes were presented to you, that those notes were only put into his hands for collection, and that he had no interest in them?

Answer: I do not recollect whether he did or not.

Mr. Brockenbrough interrogated.

Question 1, by Mr. McConnel.

Had it been understood before you brought these charges against McConnel, that he would not be a candidate for re-election for Commissioner, would you have brought these charges?

Answer: I believed Mr. McConnel had been guilty of numerous derelictions of duty as Commissioner of the Board of Public Works, and felt that my own interests had been sacrificed by his misconduct; and I never would have complained against him had he not been a candidate for re-election to the office of Commissioner, of which I was convinced he had proved himself unworthy.

Question 2: When was the charge about the lots in Jacksonville brought against McConnel; and what was the reason you did not prefer all the charges at once?

Answer: The charge about your buying the Fogus lot was preferred against you by me at Vandalia about the 16th of January last; the cause of my not bringing the charge before the committee at their first meeting, was owing to my never having previously arrived at the facts and evidence so as to found the charge upon, although I had frequently heard reports of that transaction prior to my first appearance at Vandalia.

The committee then adjourned until to-morrow, at 6½ o'clock.

THURSDAY, February 7, 1839, 7 o'clock.

Committee met.

Present: Messrs. Gatewood, Hacker, Browning, and Richardson, of the Senate; Roman, Hardin, Naper, French, and Thornton, of the House.

McConnel offered and read to the committee the reports and communications of the acting Commissioner and engineers in relation to the Northern Cross railroad, and the Naples branch, together with a map of said branch and all surveys, which are attached to the 47th page of this Journal.

After Mr. McConnel had been sworn as to the correctness of the above reports, he submitted the following affidavits, and also the following notice to Austin Brockenbrough:

MORGAN COUNTY, ILLINOIS, *January* 13, 1839.

MR. AUSTIN BROCKENBROUGH:

SIR: In pursuance of the order of the investigating committee now at Vandalia, I shall proceed on the 19th of this month at the office of Geo. Rearick, Esq. a justice of the peace in Jacksonville in said county, to take the depositions of James Dunlap, James McKinney, Wiley Harp, William Pollock, and twenty others, and to continue from that day forward from day to day until all are completed. I shall also on the nineteenth day of January at the office of Esq. Eckelburner, in Naples, in said county, proceed to take the depositions of H. W. Van Syckel and ten other witnesses, and to continue from day to day until all are taken. I shall also proceed and at other times and places in said county to take the depositions of other witnesses, the times and places of doing which you will be notified at one of the former times of taking depositions if you shall be in attendance; if not, I shall proceed to take said depositions without further notice than this, and whether you are present or not. All of those depositions are to be and will be read before said committee in the investigation of the charges preferred by you against me.

M. McCONNEL.

Served this notice by delivering a copy to Brockenbrough on the 13th of January, in Morgan county, by reading the same to him.

M. McCONNEL.

Sworn and subscribed before me this 17th day of January, 1839, by M. McConnel.

GEO. REARICK, *J. P.*

STATE OF ILLINOIS, *Morgan County.*

Personally came W. S. Wilkinson before us, the undersigned, two acting justices of the peace within and for said county, and after being duly sworn, deposeth and says that he has been called upon by authority as a witness in a charge against the Commissioner of the first judicial circuit about the location of the Naples branch of the Northern Cross railroad.

He further says that he has heard a copy of said charges read, and can say in relation thereto that he aided in surveying two lines of said branch, and that he believes that the construction of the shortest line is the cheapest; but he has no hesitation in saying that the line adopted is the nearest route from Jacksonville to Naples, and is a part of the road between the two places the most valuable.

Said Wilkinson further says that he knows nothing about any positive order by the Commissioner to Mr. Bucklin to locate either one of the said routes or the other; he knows nothing of the right of the Jack-

sonville and Naples Railroad Company, or of the cost of a lot or lots for a depot and engine-house upon either. And further he saith not.

W. S. WILKINSON.

Sworn and subscribed by the said W. Wilkinson before us at the office of Geo. Rearick, in Jacksonville, the 17th day of January, 1839.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

STATE OF ILLINOIS, *Morgan County.*

James Dunlap, who having been duly sworn, deposeth and says that he is acquainted with the plat of Meredosia and with the situation of Duncan's property there, and with the location of the property said to have been purchased of said Duncan by the Waldos sometime in the year 1837; and that he believes that none of said property is situated upon the immediate line of the railroad as now located and completed. If any of said property is situated upon said road, he has never heretofore understood where it lay. He further says that he was one of the contractors on said road; that he was informed when we (Leslie and Dunlap) were about to let a sub-contract to Waldo, Thompson & Co., that we must commence about one mile from the river as a permanent location was not yet made in the town of Meredosia. He further states that, sometime in the summer of 1838, Murray McConnel, Commissioner, requested him to say to J. M. Bucklin, principal engineer, that he must go to Meredosia and make a permanent location of said road, and place said location in the best place for the interest of the State; and that he gave said information to said engineer, and he located it accordingly, which location is the same upon which the road is now situated. In all his conversation with said McConnel about the location and construction of said road, he never knew that he had any interest in Meredosia. Said Dunlap further says that all the railroad iron shipped to Naples or Meredosia was shipped to the contractors, of which he was and is now one, and that by the terms of their contract with the State they were to pay to the State whatever price the iron would have cost delivered to them, and nothing more. The first cargo of iron was shipped on H. L. Robinson and consigned to Naples as I was informed; and so soon as such information was received I called on M. McConnel and informed him of said shipment. He then stated to me that he instructed Mr. Oakley to ship the iron to New Orleans subject to his order, and that said iron was not ordered by him to Naples. We (January and Dunlap) then asked McConnel to give us an order to his house in Naples, to deliver the bills of lading over to us that the iron might be delivered at Meredosia, and stated that we did not wish to incur an extra expense for receiving the said iron as we were prepared to receive the same. Mr. McConnel gave us an order to his house in Naples, and as I have been informed by J. T. January, was delivered in Naples before the said steamboat arrived, but they failed to comply with the order. One of said firm went from Naples to Meredosia on said steamboat and received said iron, and charged commission on the same. Said Dunlap states that he does not know whether the house of Godfrey, Lowrie and Small drew a draft on the State Bank of Illinois for the charges from Europe to New Orleans upon the

first cargo of iron or not, but knows that said house did draw a draft upon said bank for the second shipment of iron, and sold it to the captain of the steamboat; and he, the said Dunlap, received of the said captain of the said boat the draft for the second shipment, and cashed it at the branch of the State Bank at Jacksonville; the same draft was sent to the mother bank at Springfield by T. O. Duncan, cashier, and was returned to said Duncan unpaid, who gave said James Dunlap notice of said draft being returned, and was compelled to lift said draft.

Col. Mather wrote the following letter connected with the subject of said draft.

Copy of the letter from Thomas Mather to January and Dunlap.

"GENTS: Mr. Oakley requested me to inform you that inasmuch as Mr. McConnel and yourselves have arranged the first draft drawn by Godfrey, Lowrie and Small on account of charges on railroad iron, it was expedient that the second one which was presented here through Mr. Duncan should be arranged in the same way, as it would give you an opportunity of saving the commission for advancing, which was charged at five per cent. on the first lot.

THOS. MATHER."

We then concluded, from the letter written by Col. Mather, that Mr. McConnel was the proper person to arrange the draft and bills of lading, and refund us the money and charge the same to us to be accounted for by us on a settlement for the iron. McConnel did pay us the money for the draft and bills of lading, and we gave him a receipt for the same. As to the shipment of the iron to Naples, I was informed by Mr. Oakley that he was to blame in shipping the iron to Naples, and not McConnel, as he (Oakley) had misconstrued his (McConnel's) letter of instructions, and found upon examination that it related only to the shipping of the locomotive and cars to Naples, and not the iron. Said Dunlap, being further interrogated, makes the following statement: That he knows that James E. and Daniel Waldo have been very desirous of having the railroad located at the upper end of the town in Meredosia, where the greater part of their property is situated, and where Gov. Duncan has a ferry; said road has not been located there, but has been located at about the centre of the town. Since said final location, the Waldos have expressed a great deal of ill will towards McConnel. Said Dunlap, being further interrogated, makes the following statement: That he knew that Mr. McConnel, sometime in the year 1837, purchased of Gov. Duncan and T. Stevenson some lots fronting said McConnel's residence on the north side of Jacksonville, but he positively knows that none of said property is situated upon the immediate line of the railroad as located and put under contract. Said Dunlap further says that he has heard the charges against McConnel read, and that he has examined them, and he now says that he does not recollect any thing more in relation to any of them that he has not heretofore stated.

JAMES DUNLAP.

Sworn to this eighteenth day of January, 1839, before us at the office of Geo. Rearick.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

STATE OF ILLINOIS, *Morgan County.*

Personally came William Pollock before me, the undersigned, an acting justice of the peace within and for said county, and after being duly sworn, deposeth and says that he has, since the spring of 1837, been engaged as senior assistant engineer under the direction of M. McConnel, Commissioner of the Board of Public Works; that, in the summer of 1837, he was engaged in surveying and locating the Northern Cross railroad between Meredosia and Jacksonville; that, during said employment, the only direction he ever received from Mr. McConnel, or any other person, in relation to his duty, was to survey all the plausible routes, and to select the best; and in surveying and locating the said road, he rigidly pursued said instruction. He most positively states that said McConnel never did in any way attempt to influence him in the location of said road, either at Meredosia or Jacksonville, or any other place, except according to the best interest of the State; and that he, the said Pollock, never learned from the said McConnel, or does he now know the fact to exist, that said McConnel now has or ever has had any interest at Meredosia, or at any other place on the line of said road. Said Pollock further states that he has no hesitation in saying that the road is now located both at Jacksonville and Meredosia, and between those places, for the best interest of the State, and the ultimate useful operation of said road. Said Pollock, being further interrogated, says that he laid out the first work for the contractors that was done on the line next to the river, and that said work was laid out some distance from the river and from Meredosia, because it was uncertain at that time what point would be adopted as being the most suitable for connecting said road with the river; and that he never understood there was any permanent location made, except where the road is now completed, although various other lines were run. The location of said road was made at Jacksonville in June, 1837, and that said location, with very slight alteration, is still adhered to, although many lines have since been run with a view of changing it. Said Pollock being asked whether he knew any thing about the Naples and Jacksonville Railroad Company, and about their right to locate and make a road from one of those places to the other through the valley of Wolf run, states that he has, since the location of the Northern Cross railroad, heard something about said company. But he does not now recollect that he knew any thing about the rights of said company at the time, and for some time after said road was located. And further the said Pollock saith not.

WM. POLLOCK.

Sworn and subscribed before us, by the said Pollock, at the office of George Rearick, this 18th day of January, 1839.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

STATE OF ILLINOIS, *Morgan County.*

James McKinney, of Jacksonville, being duly sworn, deposeth and says that he is recorder of the county of Morgan, and State of Illinois, and that he has the custody of all the records of land titles in said county.

Said McKinney further says he has thoroughly examined the records of his office, and that it does not appear that Mr. McConnel, of Morgan county, now Commissioner of the Board of Public Works, is or ever was the owner of one foot of land in Meredosia. He further says that he is acquainted with the location of the railroad between the river and Jacksonville, and he is confident that the record does not show that the said McConnel now is or ever has been interested in any lands upon the line of said road. Said McKinney further says that he knows that said McConnel, sometime in the month of March, 1837, purchased some property of Gov. Duncan in Jacksonville, and in the month of May following, he purchased some lots of Mr. Stevenson. But between this property and the railroad, is one lot of 50 feet, and one of 70 feet, and a parcel of land not laid out into lots at all. Said McKinney further says that he is informed that sometime after the road was located, said McConnel purchased another lot called the Fogus lot, the deed for which bears date in the following March, being March, 1838. But this lot is not situated upon the line of the railroad, but between that and the road is one lot of 70 feet, and a parcel of land not laid out into lots. Those are all the lots purchased by said McConnel in Jacksonville since the internal improvement law passed, so far as the said McKinney is informed, or has heard of. Said McKinney says that he believes he is acquainted with the location of all the property belonging to said McConnel in Jacksonville, and he is confident that none of said property is situated on or even next to property that is on the line of the railroad. Said McKinney, being interrogated, says that he has examined the records in his office for a conveyance of property in Meredosia, from Gov. Duncan to James E. and Daniel Waldo, dated in 1837; and that said record shows but one conveyance from Duncan to said Waldos in that year, and that the same mentions the sum of $20,000, and is for property in Cobb and Aylesworth's addition to Meredosia, and bears date the 26th day of December, 1837, and not in March, 1837. Said McKinney, being further interrogated, says that he is acquainted with James E. and Daniel Waldo, and with Mr. Austin Brockenbrough, and that he knows that those persons and others were very anxious that the said road should be located down Coon run, and in the upper end of the town of Meredosia, near Gov. Duncan's ferry, the mill and distillery of the said Waldos, and near to the land of the said Brockenbrough; and that they have been greatly dissatisfied because said McConnel did not procure said location to be so made. Said McKinney further says that he knows that the said Waldos used every means in their power to procure said location to be made to suit their interest; and they even went so far as to write a letter to the Commissioner, (which letter said McKinney saw, and believes it was written by James Waldo) making a proposition to him to raise a large sum of money out of the State, by selling the State some lots, and to locate said road and the depot upon the same; by which said McConnel was also to be greatly benefitted; which is, as near as the said McKinney recollects, the contents of said letter. Said McKinney being interrogated whether he knows what has become of that letter. states that he does not know, but has been informed, and believes, that it was lost by the grand jury which sat in Morgan county last June. Said McKinney, being interrogated whether he ever heard Mr. Brockenbrough

state who paid his expenses while engaged in prosecuting Mr. McConnel, says that he did not hear said Brockenbrough state who paid them, but he stated they were paid, and they cost him (said Brockenbrough) nothing. Said McKinney, being asked what business Mr. Brockenbrough followed, says that he has been engaged for the last two or three years in land and town lots. Said McKinney further says that he is informed and believes that a secret combination of persons exists, who have agreed to get up charges and prosecute said McConnel, and, if possible, to get him out of office, but who the different members are of that secret combination he has not the positive information to state, although circumstances within his knowledge may have induced a belief as to the identity of the persons engaged. Said McKinney further says that he understood that his name had been furnished to the investigating committee as a witness to sustain the charges presented by Mr. Brockenbrough against McConnel; and the said McKinney now says that he knows nothing about the purchase by McConnel of Waldo, or any other person, of property in Meredosia; nor does he know any thing about an offer to let the building of a depot across the river, or the location of the Naples branch road, or any other thing connected with any of these charges, that he has not already hereinbefore answered. And further he saith not.

J. McKINNEY.

Sworn and subscribed before us, at Jacksonville, at the office of George Rearick, by the said James McKinney, this 17th day of January, 1839.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

STATE OF ILLINOIS, *Morgan County*, ss.

Personally came John W. Evans before us, and makes oath and says that, at the July term of the Morgan county circuit court, I, John W. Evans, was one of the members of the grand jury; that certain members of the jury and other persons, not members of the jury, were industriously engaged in seeking out evidence, and endeavoring to find indictments against M. McConnel, as Commissioner of the Board of Public Works; and it was evident to me that a part of the jury (whose names I could mention if necessary,) and the prosecuting attorney, aided by some other persons, were determined to get up indictments against the said McConnel "right or wrong," as I stated to the jury while in session. One of the persons who seemed to be solicitous and anxious in this matter, was one James E. Waldo, who appeared several times before the jury to testify against the said McConnel. He there presented a paper, signed by McConnel, by which he bound himself, or agreed to take of the two Waldos an interest of one-third, to the best of my recollection, of some property that was to be purchased by them of Governor Duncan. This paper, I think, bore date in January, probably the first, 1837. But he, Waldo, testified it was made a long time after that, and

was ante-dated by him by the express agreement and advice of McConnel, as near as recollection serves me. Said Waldo testified to several other things and showed some disposition of feeling against McConnel, and apparent dissatisfaction because McConnel had not located the road either upon his land, or in some way to suit his views. And I, the said Evans further say that, when the prosecuting attorney appeared among the grand jury, his opinion was asked whether it was a violation of law in the Commissioner to purchase property in a town through which, or to which, railroads were required by law to pass, provided said property was not on the immediate line of the road; and the said attorney, after examining the law, decided, and so instructed the jury, that such an act was no violation of the law, and was not indictable. But the day following, the prosecuting attorney appeared and instructed the jury that they were bound to find indictments against McConnel for acts which he, the day previous, had decided were not in violation of law. The said Evans, being interrogated whether this was the regularly elected attorney, says he was not the regularly elected attorney, but I suppose he was appointed by Governor Duncan. Said Evans further states that, at about the time of the said July term, he had learned that the two Waldos had been attempting to bribe, or in some way to procure Mr. McConnel to locate the road and the depot on their land, and that they had written to him a letter making some such proposition. During the session of the grand jury, said Evants met Mr. McConnel on the public square, in Jacksonville, and asked him for the use of said letter, which said McConnel gave to him. And the said Evans, acting, as he supposed, in the line of his duty, presented said letter to the grand jury as a charge against the said Waldos, but a majority of said jury refused to have any thing to do with it, and the said Evans returned said letter to Mr. McConnel. When the grand jury met the next morning, a proposition was made to send for Mr. McConnel, swear him as a witness, and get said letter. Mr. McConnel was accordingly sent for and sworn, as a witness, generally. The letter was demanded and given to the foreman, and Mr. McConnel was questioned and compelled to testify upon all the charges that had previously been presented by the said Waldo against the said McConnel. The jury found four indictments against the said McConnel, but none against the said Waldo. Said letter was put among the other papers that were before the jury. The said Evans never saw it afterwards, but understood that it was lost, or taken from the jury room. Said Evans says he read said letter, but he cannot state from recollection all its contents; but, so far as he does recollect, it was a proposition from the Waldos to McConnel to locate the railroad and depot upon their land, and to purchase the land from them for the State, and that they would give McConnel property, or some other consideration, to be increased in the same proportion as the amount received by them from the State was increased. I believe the extent of the ratio to which said Waldos, in their said letter, increased it, was $12,000. The date of this letter and the whole of its contents are not precisely recollected, but said Evans thinks it bore date some time in the latter part of the summer of 1837; and the contents were, in substance, as near as I can recollect, as stated. The said Evans, being interrogated as to the evidence before said grand jury, in relation to said James E. Waldo, says

to the best of his recollection, that it was in proof before the jury that said Waldo had endeavored to bribe the Commissioner to locate the railroad and depot on their land, and to purchase said land at a great price for the State, and had failed in the attempt. And it was further in proof before said jury, as near as I recollect, that when said Waldo had failed in his attempt to bribe the Commissioner, that he threatened him that, if he did not locate said depot on his land, and purchase the same for the use of the State, he would go before the grand jury and he would swear enough against him to indict him, stating that he had been requested to do so by certain persons about Jacksonville; but that, if said purchase and location could be made, he would go away to the Black Hawk [country,] and those persons should be disappointed. It was further in evidence before said jury that said depot was not located on his land, and his land was not purchased for the State; and said Waldo did appear before said grand jury and give such evidence against the said McConnel, Commissioner, as to cause him to be indicted. And further the said Evans saith not.

J. W. EVANS.

Sworn this 19th day of January, 1839, before us, at the office of Geo. Rearick.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

STATE OF ILLINOIS, *Morgan County*, ss..

Personally came Samuel S. Brooks before us, the undersigned, two acting justices of the peace in and for said county, and made oath that he has been engaged for about eight months past in the railroad office at Jacksonville, and on the different lines of railroad under the direction of McConnel, Commissioner of the Board of Public Works for the first judicial circuit; and that, during said time, he has been placed in a situation to become well acquainted with, and to know much about, the conduct of said Commissioner, and that he has read and examined a copy of the charges preferred against him by Mr. A. Brockenbrough; and the said deponent now says that he knows of no circumstance that leads him to believe that any of those charges are well founded. Said Brooks, being interrogated, says that he has been acquainted with said Brockenbrough ever since the spring of 1834; and that for the last two or three years he has been engaged in speculating in land and town lots, and that he has on one or more occasions borrowed money from the State Bank, or one of its branches, and from other sources, for the purpose of aiding him, the said Brockenbrough, in his speculation, as the said Brooks has, at different times, heard the said Brockenbrough say. During the latter part of said time, the said Brockenbrough has been principally engaged, as deponent believes, in making turns, and endeavoring to get out of the embarrassment resulting from his speculations; became possessed of a farm adjoining or in the vicinity of Meredosia, and of some other property in the upper part of said town, near or through which property the Northern Cross railroad must have passed, if it had been located down Coon run, so called, and to the upper end of said town of

Meredosia. After it was ascertained that said road could not be located as the said Brockenbrough desired, he became very much dissatisfied with the Commissioner, and often stated in the presence of this deponent that he was against any body that was not favorable to his interest; and that McConnel wanted the railroad to suit his interest, but that the location had very much injured him, the said Brockenbrough, and that he was determined to do every thing in his power to break him, the said McConnel, down, or defeat his re-election. Said Brooks further says that, at the July term of Morgan county circuit court, in 1838, said Brockenbrough and James E. Waldo, while the grand jury was in session, were in constant attendance upon the court, according to best of deponent's recollection and belief; and that the said Waldo, aided by other persons, both on and off the jury, as deponent verily believes, was very zealous in getting up charges against said McConnel, as Commissioner, and that they did succeed in getting up four indictments, which deponent was informed, and believes, were subsequently overruled by the court. Said Brooks further believes that James E. and Daniel Waldo are deeply interested in property in the upper part of Meredosia, and that they have been somewhat engaged in speculating in land and property in and about said town; and that said persons were apparently very anxious to procure or have the location of said railroad and the depot made at the upper end of said town and upon their property; and, among other means resorted to for that purpose, and while it was yet uncertain where said depot would be located, the said Waldos, or one of them, sent to the Commissioner a written proposition (which writing, the said Brooks says and believes was written by James E. Waldo) offering a large consideration, in the character of a bribe, to said Commissioner to locate the depot upon their land, and so continue it that they could sell to the State a part of their property at a high price; the exact purport of this writing, this deponent does not now recollect, but believes that the Commissioner was to have been benefitted in proportion to the amount of money they could obtain from the State for their property. Said Brooks further says that he is informed and believes that, after he saw this writing, the possession thereof was, by some means unknown to him, obtained by the grand jury, and was never afterwards returned to said McConnel, as the said deponent has been credibly informed and believes. Said Brooks further says that, in all his intercourse with said McConnel, (which intercourse has been continually intimate, and much of it unreserved as to the interchange of conversation) he never learned that the said McConnel had any interest whatever in Meredosia, or near it, on the located line of said railroad. This deponent further says that he is acquainted with all or nearly all of the property belonging to the said McConnel, in Jacksonville, and that he is well acquainted with the location of the railroad through said town; and said deponent has no hesitation in saying that the said McConnel is not now, and never was, as this deponent ever knew, the owner of any property in said town situated upon the line of the railroad, or adjoining to any lot that is upon the immediate line of said road. Said Brooks says, further, that he has been engaged several months in procuring the right of way for the Northern Cross railroad over the lands of individuals, and in this service he has traversed the line of said road from the Illinois to the Sangamon rivers,

and that, in all his researches after the owners of lands, he never found any whatever belonging to, or obtained by, said McConnel, or in which he had any interest, directly, or indirectly. Said Brooks, being asked where said railroad is located at Meredosia, says that it is located and constructed nearly in the centre of said town, as he believes, and not upon the land of the Waldos at the upper end. Said Brooks, being interrogated as to his interest in Meredosia, says that he had a small interest adjoining the upper end of the town, near to property belonging to the Waldos, and to the aforesaid Brokenbrough, but has [not] now and never had any very near the railroad. Said Brooks, being asked whether he is [in] the employ of the State under said McConnel, says that he is not, and has not been since November last, and has no expectation of being employed again. Said Brooks, being interrogated, says that he is informed and believes that a combination of disappointed persons in and about this place (Jacksonville) and Meredosia, has been formed, who, from selfish or interested motives, more than for any especial regard for the public good or for any good cause, has been heretofore, and are now, as this deponent believes, engaged in bringing up charges and prosecutions against the said McConnel for the evident and avowed purpose of depriving him of the office of Commissioner, and for sundry other unworthy purposes. And further deponent saith not.

SAMUEL S. BROOKS.

Sworn this 18th day of January, A. D. 1839, before us.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

STATE OF ILLINOIS, *Morgan County*, ss:

This day personally came L. E. H. Houghton before us, the undersigned, two acting justices of the peace within and for said county, and, after being duly sworn deposeth and saith that he hath seen and examined a copy of the charges prefered by Austin Brockenbrough against M. McConnel, as Commissioner. He also sees, from a catalogue of witnesses annexed to said charges, his name put down as a witness against said McConnel.

Said Houghton now says that, after examining those charges, he has come to the conclusion that his knowledge of those charges would not tend much to prove the guilt of McConnel, as Commissioner as aforesaid. He recollects having heard a conversation between said McConnel and James E. Waldo, at the July term of the Morgan county circuit court of 1838, in which said McConnel expressed some dissatisfaction about the location of the railroad and depot at Meredosia, believing it would have been better to have had it go further north, and observed that it would not take much to have the same changed, so that it would strike the river at or near the foot of the island. And I also understood that it had been his intention to have had it there strike, as there had been some surveys and grading to that effect.

Question: Do you or not know that Messrs. Brockenbrough and Waldos have been greatly dissatisfied about the location of the road at Meredosia, and that they wanted it at the upper end of town? State all you know about that.

Answer: They were.

Question: Have you not heard Brockenbrough and Waldo, or either of them, threaten to prosecute and do all they can against said McConnel, and against his holding the office of Commissioner?

Answer: I have heard Brockenbrough say that, if he did not get justice, or something to that effect, at the hands of the Legislature, he would prosecute said McConnel at the next term of court; and from the proceeds of such suit, that he would take his expenses to Vandalia and pay the balance of [to] the internal improvement fund, and that McConnel could not be re-elected Commissioner. And I further have understood both from him, the said Brockenbrough, and from the Waldos, that they intended to pursue McConnel until they are satisfied, or saw some other person in his place.

Question: Have you read and examined the copies of charges preferred by Brockenbrough against McConnel; if you have, do you know any thing more in relation to them that you have not stated?

Answer: I do not know that I do. And further saith not.

LIBERTY E. H. HOUGHTON.

Sworn this 19th day of January, 1839, before us, at the office of Geo. Rearick.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

On motion of Mr. Hardin,
The committee adjourned.

MONDAY, FEBRUARY 11, 1839, 7 O'CLOCK.

Committee met.

Present: Messrs. Gatewood, Browning, Hacker, of the Senate; and Robinson, Roman, French, Hardin, Calhoun, Naper, and Thornton, of the House.

Mr. Charles Collins, being duly sworn as a witness, produced the following deposition, which was read and received by the committee:

"Charles Collins, being duly sworn, deposeth and says that he was the principal owner of the Naples and Jacksonville railroad, and that he knows every person that had any interest in said road, and where all the money came from that was expended on said road; and that M. McConnel did not have one dollar's interest, directly or indirectly, in said road, neither did he ever pay one dollar towards the construction of said road, nor did he receive any of the proceeds of the sales of said road to the State in any way whatever, as this deponent believes. Said Collins further states that, at the time he made a verbal contract with Gov. Duncan to unite the Naples and Meredosia roads, McConnel did promise to take stock and assist in building the road, and thinks McConnel took stock to the amount of $2,500; but, at the first meeting of the stockholders, a dispute arose between Gov. Duncan, McConnel, T. T. January, and Mr. Leslie, about the location of the road, which ended in the final dissolution of the contemplated union of said Meredosia and Naples Railroad Companies; and that McConnel then said that he would have nothing more to do with either of the roads,

and that we might manage them as we pleased, for he was out of the scrape. He has been as good as his word, for the Naples company have never received a dollar from him from that day to this. The above contract with Gov. Duncan was made some ten months previous to the time the Naples company obtained their charter. Collins further says that he is the principal proprietor of the town of Naples, and knows nearly all of the owners of property in said town, and that he does not know of any property in said town owned or claimed by McConnel, except one-half of a fractional lot, now occupied by McConnel, Ormsbee, and Co., with a warehouse; which interest he acquired in the fall of 1837, long after the location of the railroad from Jacksonville to Meredosia. Said Collins further says that he never has sold McConnel any property in said town, except a forty foot lot adjoining the warehouse of McConnel, Ormsbee & Co.; which lot the said Collins promised to deed to the said McConnel, provided he would build a warehouse upon the same; but the warehouse has never been built, and the deed has never been made; and the said Collins never did sell or promise to sell, or give, or promise to give, or donate to said McConnel any other property in said town than that above mentioned, either directly or indirectly; nor does he know of any other persons having sold or donated to said McConnel any property in said town, or promised so to do in any manner whatever, neither at this or any other time whatever. And the said Collins further says that he had no hand, in any way whatever, in locating the road down Wolf run, and that he did not know where the road would be located, until the same was done; neither does he believe that McConnel himself knew where the road would be located, for he, the said Collins, received a letter from said McConnel some short time before the location of said road, in which he said he believed the engineers would locate the road down Coon run. Collins further says that there never was an understanding or agreement with McConnel to make a branch road to Naples previous to the location of the Northern Cross railroad, nor has there been any such understanding since, until he, as Commissioner of the Board, made such a contract; and that he received no compensation directly or indirectly from said Collins or any other person, as he believes, for having located said Naples road, and that he believes McConnel could not have had any more interest in that road than he had in the road to Meredosia, or any other road in the county.

Said Collins further says that, sometime in the fall of 1838, McConnel contracted with him for a small light-draft steamboat, then at the town of Naples, for the purpose of improving the navigation of the Illinois river. The boat was not in a condition to be used, at the time the contract was made, but the contract was, that the boat was to be corked and made tight, and that a good cabin was to be put upon said boat, and fitted up so as to accommodate the engineers and hands, and that the same was to be in readiness within a certain number of days; and it was agreed that McConnel would pay over to said Collins the sum of $2,500, provided said boat was ready by the time specified; and that after the repairs were made, and the engineers should be satisfied that it would answer the purpose, then, and in that case, he was to take the boat and pay the money; but the time was so short that the boat could not be in readiness by the time agreed upon, and McConnel said he

would not take the boat unless it was ready by time, because the season was so far advanced that he had no time to lose, consequently I found that the boat could not be ready in time, and I stopped the repairs; but not one dollar of the aforesaid sum was paid to me on account of said boat by McConnel, because the boat was not ready by the time agreed upon, although a voucher was given by me in order to enable McConnel to obtain the money from the Fund Commissioner so as to have the same in readiness when the boat would be completed.

CHARLES COLLINS."

Mr. Collins interrogated.

Question 1, by Mr. McConnel: Are you acquainted with the country between Jacksonville and Meredosia? If so, state whether you know where the Northern Cross railroad is located; and is it located on the best route between the two places?

Answer: I am acquainted with the country, and think it is located upon the best route. I have examined the country frequently, with a view to find the best route for a railroad, and I have no hesitation in saying the road is located on the best and cheapest route, and in fact the only one which the road could be got through without a great expense.

Question 2, by Mr. Browning: What did you pay for the steamboat you agreed to let Mr. McConnel have for the use of the State?

Answer: The boat was sold at auction at St. Louis. It cost me altogether about $2,000. I know one bill was $650. I gave $1,200 in the first place, and paid the foundry I think, $650 for what they did. I did not buy the boat at first myself, nor was I present when it was sold.

Question 3, by Mr. Browning: What became of the boat after Mr. McConnel declined taking it; and was it ever used any more, or ever fit for service afterwards?

Answer: I found the boat could not be got in readiness by the time agreed upon with Mr. McConnel, and concluded to wait until the river arose—it required about a foot's rise in the river, before the boat could be got off without considerable expense; as soon as the water arose so as to float the boat, Captain McCourtenay commenced using it on the ferry as usual. I only know this by information, and he, Captain McCourtenay, informed me that somebody knocked holes in the boat and sunk it. The boat is still in the bottom of the river—the engine is taken off and put into a steam-mill, I suppose.

Question 4, by Mr. Browning: At the time you receipted to Mr. McConnel for $2,500 on account of the steamboat, did he give you a check for the money?

Answer: He did not; he refused to pay a dollar on the boat until the engineer approved of it. He had his doubts whether the boat would answer the purpose. I assured him it would answer the purpose, for it was good and sound. He said that if I had a mind to go on and fix the boat, put a cabin on it, and it answered the purpose, and if the engineers approved of it, he would take it.

Question 5, by Mr. Browning: Did he give you any writing to show that the money was not actually paid?

Answer: He gave me some writing that I left with Mr. Leslie, as I was going down the river, but I do not recollect precisely what it was;

I think it was a receipt for the voucher, and stated in it, that if I would fix the boat in such a way, the money would be paid over.

Question 6, by Mr. Browning: Do you know whether Mr. Leslie ever received any money on that receipt, or on account of the steamboat?

Answer: I cannot know any thing of that matter, further than that Mr. Leslie told me had received nothing. And I fully believe that he did not.

Question 7, by Mr. McConnel: If the boat had been put in repair as agreed upon, would it have been worth $2,500, and would it have been suited to the services for which it was intended?

Answer: It would have cost me all of that, and I believe it would have been worth it; and I believe it would have been a suitable boat for the purpose for which he wanted it.

Question 8, by Mr. Hardin: Did Mr. McConnel ever own any interest together with yourself and others in the Morgan city tract of land, at the time the Northern Cross railroad was located? If so, state what was the number of acres in said tract, and what Mr. McConnel's interest in the same.

Answer: The quantity of what is called the Morgan city tract of land contains four or five thousand acres. Mr. McConnel owned one-eighth of the whole tract. He become the owner of it, I think, in July or August, 1836. I believe he did own it at the time and before the location of the Northern Cross railroad, and before he was Commissioner.

Question 9, by Mr. Hardin: Did you ever tell Mr. McConnel after he was elected Commissioner, that, on account of your interest in the Naples and Jacksonville railroad, you intended to claim damages from the State for locating the Northern Cross railroad down Wolf run, unless a lateral branch was made to Naples? If so, state when you first gave him that information.

Answer: I always intended if the State did not make a road there, I should do it myself. I dont recollect having a conversation with Mr. McConnel, until last fall or summer. I had some conversation with Mr. Leslie, but not with Mr. McConnel, I think, before that time.

Mr. McConnel submitted the deposition of H. W. Van Syckel, which was read and received by the committee.

STATE OF ILLINOIS, *Morgan County:*

Personally came Holloway W. Van Syckel before us, the undersigned, acting justices of the peace in and for said county, and, after being duly sworn, deposeth and says that he was at Naples, in Morgan county, when the first shipment of railroad iron landed at Naples, on the Illinois river; and that he knows said iron was shipped to Naples, and was consigned to the house of McConnel, Ormsbee & Co. of that place; that, when the iron arrived, the partners of the house, then present at Naples, told the captain of the boat that they knew that said iron was intended to be landed at Meredosia by said McConnel, and not at Naples; and said partner then requested said captain to take it to Meredosia and not land at Naples. The captain objected, saying that he was consigned and insured to Naples, and had agreed upon the amount of freight to Naples; and that he would not run the risk to go further up the river. Upon this the house of McConnel, Ormsbee & Co., agreed to run all risks, and to

pay all additional charges, if the iron could be landed at Meredosia: and thus they procured the iron to be landed at Meredosia; at which place one of the partners went and received said iron, and paid all freight and charges, and took more trouble and risk upon themselves than they would have done, but for the fact that McConnel was the Commissioner, and they supposed the State was interested. For all this trouble they charged only the common commission, and nothing for extra freight and risking said iron from Naples to Meredosia, and for all other extra trouble they had with it. Mr. McConnel was not present when said iron arrived, and, as this deponent believes, did not know of its arrival. After this iron arrived and was landed at Meredosia, an order was presented from Mr. McConnel, as Commissioner, to said house, to deliver over any other iron that might arrive to Messrs. January & Dunlap, railroad contractors: consequently, when the next shipment came, which was in a few days, the house of McConnel, Ormsbee & Co. refused to have any thing to do with it; and after some difficulty, the captain of the boat was prevailed upon to go on to Meredosia, and land the iron there. Said deponent further says that this iron was not landed at Naples by Mr. McConnel, as he is informed and believes, as he, said McConnel, had always before that informed said deponent that said iron was ordered to New Orleans, subject to his order there: and he had always refused up to that time, though often solicited, to give the said house the forwarding of said iron; and so soon as he was informed that more iron was to arrive, he ordered it to be landed at Meredosia, and directed that said house should have nothing more to do with it, as it was a matter of the contractors alone, and they were disposed to find fault if any others but themselves were permitted to derive any benefit. After said iron was landed and all charges paid, the captain said he had a draft from the house of Messrs. Godfrey, Lowrie & Small, for a part of those charges, upon the State Bank of Illinois; which draft was drawn because said house at New Orleans supposed probably that the house on the river would not be prepared to advance, at a moment's warning, so large a sum, and in that event the captain could raise a part of the money by selling or cashing his draft, but it was only intended to be used in that event. The charges in the bill of lading could not be immediately paid; and, as those charges had now been paid, he supposed there was no further use for the draft. The said Van Syckel says that the house of McConnel, Ormsbee & Co. did not purchase said draft, nor did they ever own it, neither did they have any use for it; neither did they ever advance any thing upon it, or charge any commission for advance made upon it; neither did [they] know of its existence, until all charges were paid on the railroad iron, neither did they ever refuse to deliver over any railroad iron to Messrs. January & Dunlap, upon Mr. McConnel's order.

Said Van Syckel, being interrogated whether he was acquainted with Daniel Waldo, Esq.—whether he had any conversation with him recently about those charges against Mr. McConnel, says that he is acquainted with said Waldo, but he has had no conversation about said matter; but says that when said Waldo and Brockenbrough were on their way to Vandalia, a few days since, he saw Daniel Waldo in Jacksonville; and some persons present asked him if he was going down to Vandalia to try to get McConnel out of office, and if they were prepared with proof

enough to do it. Waldo said he was a witness against him and would swear any thing to get him out, but he did not know what it would be necessary to prove until he got down there; but at any rate he would swear any thing to get him out of office. Some person present said, "then you are going to give him thunder;" and Waldo replied they were, if they could only find out how to do it. And said Van Syckel, being no further interrogated, saith nothing.

HOLLOWAY W. VAN SYCKEL.

Sworn this 19th day of January, 1839, before us, at the office of Geo. Rearick.

GEO. REARICK, *J. P.* [L. S.]
JAS. BERDAN, *J. P.* [L. S.]

Mr. Roman offered the following resolution, which was adopted:

Resolved, That the committee will, on to-morrow evening, proceed to investigate the charges preferred by John Murray against Mr. William Kinney, Commissioner of the Board of Public Works for the second judicial circuit; and that subpœnas be issued for John Murray, Edward Smith, ——Terrell, (engineer,) William Moore, and John Thomas, jr.; and that said Commissioner be informed thereof, and furnished a copy of the charges.

The committee then adjourned.

TUESDAY, FEBRUARY 12, 1839, 7 O'CLOCK.

Committee met.

Present, Messrs. Hacker, of the Senate; Hardin, Roman, French, and Robinson, of the House. Not being a quorum present, the committee adjourned until to-morrow evening at seven o'clock.

A copy of the proceedings of a meeting held, by special call, at the Fund Commissioners' office on the 15th January, for the purpose of examining books and papers, &c.

Present: Messrs. Gatewood, Browning, Richardson, Thornton, Hardin and Naper.

Memoranda relative to the $200,000 *distributive fund.*

1. Extract of a letter from M. McConnel to Thomas Mather, Fund Commissioner, dated January 18, 1838.

"It is certain that none of the railroads in this (first judicial) circuit will pass through the county of Greene or the county of Cass."

2. Extract of a letter from Wm. Kinney to Col. T. Mather, dated January 27, 1838.

"Those counties, through which it is equally certain that none* will pass, are Randolph, Monroe, and Bond."

* No railroad.

3. Extract of a letter from J. Wright to Thomas Mather, Fund Commissioner, dated January 24, 1838.

"The counties, through which it is certain that no railroad or canal (projected by the present internal improvement act) will pass, are Knox, Warren, and Calhoun."

4. Extract of a letter from Elijah Willard to Thomas Mather, Fund Commissioner, dated February 8, 1838.

"It is certain that no roailroad or canal will pass through the counties of Johnson, Pope, or Hamilton. It is uncertain whether a railroad will pass through the county of Jefferson."

The circular issued by the Fund Commissioners was not replied to by Mr. Alexander, as to the counties of White, Crawford, Lawrence, Clark, and Jasper. He has certified, as to the county of Clay, that no railroad or canal was located through said county.

Where answers were not given to the circulars of the Commissioners, they arrived at the conclusion from the map and the law.

They distributed $144,700 according to the census of 1835, and reserved the balance for contingencies and uncertain counties.

They paid out the sums to the order of the county commissioners' court of each county, made in session, and receipted for by the agent appointed by the court.

Arrangment with the banks in relation to interest on deposites.

"Both banks are, by arrangments with the Fund Commissioners, subject to discontinuance by either party, and at any time. They have agreed to pay six per cent. on the money deposited with them, above a certain sum. The permanent deposite (free of interest) in the State Bank is $30,000, and that in the Bank of Illinois is $15,000."

Construction of the twenty-fourth section of the "Act to establish and maintain a general system of internal improvement," by the Fund Commissioners.

"The Commissioners have construed the proviso of the twenty-fourth section of the act to mean, 'by large amounts,' sums under $20,000, and not less than $1,000."

Committee then adjourned.

At a meeting of the committee held at the Fund Commissioners' office, Thursday January 17, 1839:

Present: Messrs. Gatewood, Browning, Thornton, Hardin, and Robinson.

Proposed amendment of the law.

"The Fund Commissioners shall give no credit to any Commissioner for any expenditure, unless the voucher shall specify the precise work

on which the expenditure is made, and show that the money has been actually applied."

Committee called on the Secretary of the Board of Fund Commissioners for copies of all abstracts of vouchers filed in his office by the Commissioners of the Board of Public Works.

Committee then adjourned.

WEDNESDAY, February 13, 1839, 7 o'clock.

Committee met.

Present: Messrs. Gatewood, Browning, and Hacker, of the Senate; and Messrs. Roman, Robinson, Hardin, French, and Thornton, of the House.

Mr. Hacker moved the further investigation be dispensed with, which was carried.

On motion of Mr. Gatewood,

The vote was reconsidered, and an investigation determined upon: whereupon a subpœna was issued for Hon. John Murray, who appeared and introduced before the committee the following additional charges against Gov. Wm. Kinney.

Charge First.—Changing the location of the Great Western mail route between Belleville and Lebanon, and particularly at that point where it enters the town of Belleville, at an expense of $1,000, or thereabouts, in the distance of half a mile.

Charge Second.—And the $1,000 made up by individuals interested in the change of the road, instead of the appropriation being expended impartially, by observing a just economy towards the State and individual rights.

I prefer the above charges against the acting Commissioner of the second judicial circuit for the following reasons.

JOHN MURRAY.

Gov. Kinney presented a list of names of individuals whom he requested to be subpœnaed as witnesses.

Committee then adjourned until to-morrow evening, at 7 o'clock.

THURSDAY, February 14, 1839.

Committee met for the purpose of investigating the charges preferred against Wm. Kinney.

Present: Messrs. Gatewood, Browning, Hacker, and Richardson, of the Senate; and Roman, Thornton, and Hardin, of the House.

A communication was read from A. Brockenbrough, requesting the privilege of having T. T. January examined as a witness against M. McConnel, which was granted; and the communication was ordered to be filed.

It was ordered by the committee that Mr. January produce his testimony in writing.

Mr. Thornton offered the following resolution, which was carried:

Resolved, That this committee will examine any witnesses in the case of Murray McConnel which may be desired by any citizen, and that the

said M. McConnel be allowed reasonable time to introduce counter evidence if he deem it necessary for his defence."

A communication from Wm. Kinney was read and ordered to be filed.

Mr. Browning offered the following resolution:

Whereas Wm. Kinney, Commissioner of Public Works, has requested subpœnas to be issued for over 40 witnesses to appear before the Committee to give evidence, on his behalf, upon the investigation of charges preferred against him by John Murray, Esq.; and whereas many of those witnesses reside at a distance from Vandalia, and could not be had here in less than a week or 10 days; and whereas it would not be proper to go into the investigation without affording to all parties ample opportunities of being heard; and whereas the session of the Legislature is now near its close, and the members of this committee are worn out and exhausted in discharging the duties that have been assigned them, the committee having now been in session a month and a half: Therefore,

Resolved, That it is inexpedient for the committee at this time to proceed with the investigation of the charges preferred by the said John Murray against Wm. Kinney.

The ayes and noes were called. Those who voted for the passage of the resolution, were Messrs. Gatewood and Browning—2.

Those who voted against it, were Messrs. Hacker, Richardson, Roman, Thornton, and Hardin—5.

The resolution being lost, the committee proceeded to the investigation.

John Murray, Esq., John Thomas, and Wm. Moore, were sworn as witnesses.

The charges preferred against Mr. Wm. Kinney being read to John Murray, he was interrogated as follows:

Question by Mr. Gatewood: State what you know in relation to these changes which you speak of in your charges against Wm. Kinney.

Answer: I know those changes were made from High street to Illinois street, in the town of Belleville. High street was the street through which the mail always passed, until this alteration was made. I also know that the road was altered from the original tract, from between Kinney and Whiteside's plantations to the widow Adam's plantation; and that it was also altered from Silver creek towards Belleville, a mile or a mile and a half, more or less.

Question 2, by Mr. Hardin: Do you know whether any of the changes you speak of will cost more to construct the same than the old line or location?

Answer: I believe they did. My own opinion is, that the change at Belleville cost considerably more.

Question 3, by Mr. Hacker: You say that Mr. Gilpin had surveyed another route than that improved by Gov. Kinney. Please state when this survey was, and under what authority he made such survey.

Answer: The survey was made some time in the spring of 1837, I think, or early part of the summer, by the authority (I understood) of the Commissioners of the Public Works.

Question 4, by Mr. Hacker: You say that the survey was made under the authority of the Commissioners of the Public Works. Do you know

that the route you speak of was not a mere random route; or was it a location?

Answer: I understood a location. It was staked down and numbered, and not changed until a year afterwards—not changed until last spring. Col. Thomas can perhaps answer the question more correctly than myself.

Question 5, by Mr. Thornton: In taking the Great Western mail route from High street, in Belleville, to Illinois street, have not the citizens of Belleville, as an entire community, been benefitted by the change? Has not the road been shortened? Has the interest of the State been impaired by the change; and has the Commissioner of that district derived more advantages from the change than the great body of his neighbors?

Answer: They have—because they have two roads to travel on instead of one; but if they had but this new road without the other, they would have been no better off. The road has been shortened (I understood) 16 or 18 links of a chain. If the State pays for the road, it has been injured or impaired by the extra expense. The change places the road nearer to his property in Main street, and excludes the business part of town.

Question 6, by Mr. Thornton: In your statement touching the changes in the Great Western mail route, you say that a change was made near the Commissioner's own house. I wish to know whether you wish to imply that this particular change was made with a view to the Commissioner's private interests, at a sacrifice of that of the State.

Answer: I am not able to say.

Question 7, by Gov. Kinney: Do you say that Gen. Moore told you that one of the persons in Belleville, who had subscribed $100 to aid in improving the road in the manner that I brought it into Belleville, had paid the $100 to me for the purpose of constructing said road?

Answer: I never made such a statement.

Question 8, by Gov. Kinney: Were you not employed by me as a superintendent on the road from Illinois town to Belleville, and further on east; and were there not changes on that part of said road, from the old travelled route; and did you not tell me you approved of such changes, especially the one made at the bluffs?

Answer: Yes, I was employed by him as superintendent on the road from Illinois town to Belleville; and there were changes made on that part of the road from the old route, and said changes caused a good deal of fuss. I have no recollection of saying I approved of such changes.

Question 9, by Mr. Thornton: Did you ever express your disapprobation of changes during the time you were in the employ of the State?

Answer: I expressed my opinion of the law, that he had not the power to do it.

Question 10, by Mr. Gatewood: How much money did you receive for your services?

Answer: I received $150, at the rate of $60 per month, finding myself and horse; and part of the time I threw in without any charge.

Question 11, by Mr. Gatewood: How far were you called from home at any time?

Answer: I live in Belleville. It is 30 or more miles from Belleville to Beaver creek; but usually the business was between Belleville and Illinois town.

Question 12, by Gov. Kinney: Do you believe the road, in the manner and way in which it is taken into Belleville, was not a benefit in a pecuniary point of view to the citizens of Belleville in the aggregate, and to those citizens in the north and east of its vicinity?

Answer: I do not. It is to Ralph's addition, and Flanagan and Craft's addition, and I have no doubt has increased the value of property in these additions considerably.

Question 13, by Gov. Kinney: How far does High street extend, according to the town plat of Belleville, east or northeast of your house?

Answer: It extends to the corner of one of my lots, and then continues along Ralph's addition in the original town plat.

Question 14, by Gov. Kinney: Does not the Commissioner own on High street a lot or part of a lot, on which is a brick house forty feet in length, much nearer the public square than yours; and does he not own on the same street further on a two story stone house, with five or six acres of ground?

Answer: Yes, but the improvement does not extend, under the provision of the law, by his property; the road always turned Thomas's corner on Main street, and did not go on past Kinney's property.

Question 15: Does the Commissioner own any property adjacent to the road as now located, which would not have been upon the road if the old location had remained?

Answer: He does not—but the present location cuts off the improvement that a great deal of property would have had on the original route, and places it nearer his property.

Question 16, by Mr. Kinney: You speak of going to Beaver creek, thirty miles east or northeast, as superintendent, &c., and of receiving sixty dollars per month for your services. How many times did you go to Beaver creek, and how many days do you believe you were actually engaged in the performance of your duties when in the service of the State?

Answer: I went to Beaver creek once. It was a detached part of the work; the balance of the time was employed in superintending, between Belleville and Illinois town, as near as I can recollect, the time for which I received wages at the rate of sixty dollars per month.

Question 17, by Mr. Kinney: You speak of the road being changed so as to go near my house. Do you know whether I was in the habit of keeping a *public* house?

Answer: He did not keep a tavern, although he accommodated persons and charged them nothing for it.

Question 18, by Mr. Hardin: You say that you do not wish to impugn the motives of Gov. Kinney. Will you please state to the committee your object in submitting the charges against the Governor. Is it to make him account to the State for any loss that you may suppose the State has sustained; or is it that you expect to recover any damages for injuries or supposed injuries to any individual or individuals; or is it with a view to

call the attention of the Legislature to the matter, with a view to any modification of the law alluded to?

Answer: My object was to know whether he had violated the law in altering the location, and whether the State was not injured by the additional expense of said alteration, and whether he had a right, as a public officer, to receive from any individual or individuals a sum of money sufficient to make up the difference between the two roads. The individuals do not expect to recover any damages, although it has cost them $700, (more or less) that I know of, to improve the street and road or route to the connection, although but justice that they ought to be left in the same situation in the keeping the road as when the Commissioner removed it; and also to call the attention of the Legislature to the matter, with a view to let the checks and barriers be placed for a proper construction of the law.

Question 19, by Mr. Gatewood: Do you mean to say that the money received for the change was for reimbursement of the State in the additional cost, or was it for the private use of the Commissioner?

Answer: That I do not believe it was for the private use of the Commissioner, but that it was for the private interest of those individuals who paid the money.

After reading a communication from A. Brockenbrough, and the passage of a resolution relative to the case of M. McConnel, (which will be found recorded on the 99th page.)

The committee then adjourned.

FRIDAY, February 15, 1839, 7 o'clock.

Committee met.

Present: Messrs. Browning, Hacker, and Richardson, of the Senate; and Mr. Thornton of the House.

A communication was received from Gov. Kinney.

Not being a quorum present, the committee adjourned until to-morrow.

SATURDAY, February 16, 1839.

Committee met.

Present; Messrs. Browning and Hacker, of the Senate; and Roman and Hardin, of the House.

A communication from Gov. Kinney, directed to the Chairman of the committee, was received.

Mr. McConnel appeared, and left a printed document, entitled "M. McConnel's defence before the committee of investigation."

There not being a quorum present, the committee adjourned until Monday evening at 6½ o'clock.

MONDAY, February 18, 1839.

Committee met.

Present: Messrs. Gatewood, Browning, Hacker, and Richardson, of the Senate; and Mr. Roman, of the House.

Those communications received on the 15th and 16th were read; and a communication received this evening from Gov. Kinney was also read; all of which were ordered by the committee to be entered upon the journal.

Letter from Wm. Kinney to the Chairman of the Committee, dated

VANDALIA, *February* 15, 1839.

SIR: When Squire Murray gets through all the evidence he has to produce in support of the charges he has preferred against me, should your committee think that said evidence has the least effect in substantiating or confirming any charge impugning my honor, integrity, or fidelity, in the discharge of my official duty as a member of the Board of Commissioners of the Public Works, I must request your committee to have summonses immediately issued for those witnesses whose names I have furnished to your Secretary, and who are the most intelligent portion of this said Squire Murray's constituents, to give evidence of the facts in relation to said charges. Should your honorable committee not deem the presence of those witnesses necessary, and think the communications and petitions, left with you last evening, sufficient to exonerate me from any thing like intentional impropriety in the official discharge of the trust confided in me as a Commissioner, you can dispense with sending for said witnesses, and close your investigation by reporting your sentiments in relation to my case.

With respect, &c.
WM. KINNEY.

Copy of a letter from Gov. Kinney to the Chairman of the Committee, dated

VANDALIA, *February* 16, 1839.

SIR: Enclosed I send you a communication from John Hay Esq., (who has been clerk of the circuit court of St. Clair county nearly forty years,) in relation to the charges against me, on account of the location of the western mail route. Mr. Hay is an old and worthy citizen of Belleville, and in every way competent to give a correct and impartial opinion relative to the benefits or injury sustained by the people in the location of said road.

With respect, &c.
WM. KINNEY.

Copy of a letter from John Hay to Wm. Kinney, dated

BELLEVILLE, *February* 12, 1839.

WM. KINNEY, Esq. In answer to the enquiries you put to me, concerning the roads made use of in the town of Belleville, to your first, I answer

that the street terminates at the end of Mr. Murray's lot, in the old plat of the town. To your second inquiry, whether or not the mail route, as it now passes from the centre of the public square, is not the most direct, in answer, I have to say that the present and new route is the nearest and best, and the most direct, entering directly into the public square of the town, and appears in fact the natural road upon which the traveling is done; and in former years when roads were not laid out, this now new route used to be traveled by the inhabitants coming from the north on horseback, when wagons could not come. To your third inquiry, I have never understood, nor have I any thing in my office to show, that you ever owned an inch of ground on that new road.

Yours, &c.
JOHN HAY.

Letter from Wm. Kinney to the Chairman of the Committee, dated

VANDALIA, *February* 18, 1839.

SIR: I herewith enclose you the petition from the citizens of Belleville, in favor of changing the route (to its natural course) of the mail road through Belleville, which has been submitted to you before, and returned to me, which I think have not been read to your committee, together with a letter from Alfred Cowles, Esq., stating the reason why an injunction could not be obtained from Judge Lockwood in the change of said road; all of which is submitted for the examination of the committee, before they determine what further course to pursue.

With respect, &c.
WM. KINNEY.

Copy of a letter from A. Cowles to Gov. Kinney, dated

ALTON, *February* 4, 1839.

GOV. WM. KINNEY, SIR: We received your letter of the first February, and am unable to comply literally with your request. Mr. Krum, a few days since, in looking over our old correspondence for the purpose of separating that which was necessary to be preserved from the other, and the letter of Judge Lockwood was deemed not necessary to be filed, and was destroyed. I recollect the substance of Judge Lockwood's letter. He declined granting the injunction upon the ground that the parties sitting up an interest could not complain because the road was taken away from them, and stated that those only could complain whose lands were injuriously affected by the passage of the road through their lands. He also expressed some doubt of the power of a Judge to grant injunctions to restrain public works. A conference with him will no doubt enable you to have his views more fully.

Yours, &c.
ALFRED COWLES.

Copy of a petition from the citizens of Belleville.

To the Hon. William Kinney, *Commissioner of the Board of Public Works for the second judicial circuit of Illinois.*

We, the undersigned, citizens of the town of Belleville,

Respectfully represent:

That Illinois street, one of the main streets in the town of Belleville, leading from the public square north, is the most natural and convenient route for the mail stage from Belleville to Lebanon, and the distance is much shorter than the route through High street, where the stage now runs; and that the improvement of Illinois street, from the court-house in Belleville, as far as Washington street on the addition to Belleville, would greatly improve the appearance of the town, and add much to the convenience of the travelling public and the inhabitants of Belleville. We, therefore, respectfully suggest to your honor the propriety of improving Illinois street as the proper channel for the conveyance of the mail, believing, as we do, that the opening of Illinois street would add more to the appearance of Belleville, and the convenience of its inhabitants, than any other work which could possibly be constructed within the limits of the corporation.

We have, with much pleasure, witnessed your endeavors on various occasions to add to the growth, prosperity, and appearance of Belleville, by suggesting important improvements, and using your influence in carrying them into effect; and we are satisfied, from the manifestations already received, that you will not let an improvement of this character escape your notice.

JOHN FLANAGAN, and *thirty-eight* others.

To the Board of Commissioners *of Public Works, at Vandalia:*

We, the undersigned, citizens of Belleville, and St. Clair county, being informed that the Commissioner of this district has been attacked and found fault with for making such alterations on the mail route to Vincennes, between Belleville and Lebanon, so as to locate the new road into Illinois street instead of High street, consider it due to the Commissioner to make the following statement, and pray to be heard by your honorable body, as follows: Your petitioners are convinced that, in altering the route as he did, the Commissioner executed the wishes of at least three-fourths of the community, as is shown by a petition addressed to Gov. William Kinney; which petition has probably been preserved in the archives of the Improvement office. If it is a correct principle, that roads are made for the accommodation of the community at large, and not for the benefit of individuals, one look on the abovementioned petition would render this, our address, superfluous, and exonerate the Commissioner at once; but having experienced the benefits arising from the new location since, we beg permission to add the following:

1st: That the new route by Illinois street is considerably shorter than the old one.

2d: That the road, as located now, leads *directly* to the public square and the court-house; which circumstance adds greatly to the appearance and improvement of the county seat.

3d: That (what we citizens of Belleville would particularly urge) the new road has tended greatly to the aggrandizement and improvement of Belleville, by opening and making accessible a great number of building lots, and, by giving the first impulse for improving the other streets of the town, (which advantage is now realized in a higher degree than could have been expected at first) has induced the Commissioner and a number of citizens of this place to undergo considerable personal expense in order to facilitate the construction of the new road.

These are some of the points which your petitioners would urge. They might add many more; but confiding in the wisdom of your honorable body to render justice to the public officer concerned, and expecting this, our address, to meet with the consideration due its import,

We remain, respectfully,

Your fellow citizens,

WASH'N WEST, and ninety-four others.

The above petition is on file in the office of the Commissioners of the Board of Public Works.

Mr. Gatewood moved that the record be written up, and the report be made to-morrow morning to the Senate and House; which was carried in the affirmative.

The committee then adjourned.

Copies of the depositions of L. D. Glines and Uriah Raplie, being part of the testimony given before the investigating committee to examine charges against M. McConnel, Commissioner of the Board of Public Works, &c.

STATE OF ILLINOIS, *Morgan County*, ss.

Personally came before me, M. Eckelburner, an acting justice of the peace in and for said county of Morgan, and State of Illinois, Lorenzo Glines, who, being duly sworn, and being interrogated as to his knowledge of James E. Waldo and Daniel Waldo—to their reputation for honesty, truth, and veracity—says that he has been acquainted with the said Waldos for nearly three years, and he knows that they have been in partnership in business and speculations, and that he has had, and has done, business with the said Waldos; and he has no hesitation in saying that they are not honest men, and that he could not rely upon them for truth and honesty; that, so far as he knows and has heard, their reputation for truth and honesty is not good in the neighborhood where they live.

L. D. GLINES.

Sworn and subscribed before me, this 21st day of Jan'y, at my office in Naples, 1839.

MARTIN ECKELBURNER, *J. P.*

I, Uriah Raplie, of lawful age, depose and say that, during much of the time of 1836 and 1837, I was a citizen and trader in the town of Meredosia, on the Illinois river; in which place did there reside one Daniel Waldo. Of him, personally, I have only the acquaintance that is formed by men in their business occurrences; and, in such affairs, I looked upon him as a man, whose character was incompatible with manly honesty or integrity. This course was fully directed to me, as I found his character to be suspicious in many particulars. It was indeed generally published among the citizens of said place that he, the said Waldo, had killed and converted to his own use hogs which were not his own; and that also he had cropped the ears of hogs not his own poperty, so that they would bear his own marks. And further the deponent saith not.

URIAH RAPLIE.

Sworn and subscribed before me, this 21st Jan'y, 1839, at my office in Naples.

MARTIN ECKELBURNER, *J. P.*

STATEMENT showing all payments that have been made by the Fund Commissioners to contractors and others, upon the special drafts of the Commissioners of the Board of Public Works, which are not stated in the abstracts of vouchers.

Date.	By whom drawn.	No. of Vouch'r.	To whom paid.	For what purpose.	Am't paid.
1838.					
July 6	M. K. Alexander -	156	Gallagher & McBay, contractors - -	Alton & Mt. Carmel railroad -	$1,245 60
6	Same -	191	James & Peter Clark, do - -	do -	204 00
6	Same -	155	E. P. Shannon, do - -	do -	1,081 20
6	Same -	190	Murphy, St Leger & Dunn, do - -	do -	929 20
6	Same -	189	Edward Clark, do - -	do -	676 39
6	Same -	160	Rogers & Albright, do - -	Great Western mail route -	495 30
6	Same -	159	Same, do - -	do -	1,673 25
9	Same -	188	Wilson & Co. do - -	Great Wabash river -	2,316 00
17	Same -	187	David Scott, do - -	Alton & Mt. Carmel railroad -	280 51
18	J. W. Stephenson -	94	James Power, do - -	Central railroad - -	1,245 03
18	Same -	96	J. Power & J. D. Passmore, do - -	do - -	2,108 30
18	Same -	95	Jas. Power, do - -	do - -	776 31
26	M. McConnel -	15	Samuel Grubb do - -	Northern Cross railroad -	255 00
26	Same -	119	W. S. Maus, do - -	Bloomington, Warsaw & Pekin railroad - -	4,117 40
26	Same -	121	Twitchel & Hunsaker, do - -	do -	1,302 20
26	Same -	124	Radford & Reed, do - -	Northern Cross railroad -	4,956 98
26	Same -	123	January & Dunlap do - -	do - -	2,134 35
26	Same -	125	Same, do - -	do - -	1,870 00
26	Same -	126	Same, do - -	do - -	2,524 41
26	Same -	45	Same, do - -	do - -	8,993 00
26	Same -	46	Same, do - -	do - -	6,503 35
26	Same -	16	Same, do - -	do - -	15,509 39
Aug. 6	Same -	17	Same, do - -	do - -	16,320 00
8	Same -	18	Same, do - -	do - -	11,307 23
8	Same -	19	Same, do - -	do - -	16,098 49
8	Same -	20	Same, do - -	do - -	11,782 61
22	M. K. Alexander -	106	Wheeler & Dubois, do - -	Great Western mail route -	427 21
Sept. 10	M. McConnel -	7	January & Dunlap, do - -	Northern Cross railroad -	11,900 00
10	Same -	8	Same, do - -	do - -	15,138 16

STATEMENT—Continued.

Date.	By whom drawn.	No. of Vouch'r.	To whom paid.	For what purpose.	Amt paid.
1838.					
Sept. 10	M. McConnel	9	Radford & Reed, contractors	Northern Cross railroad	$2,437 91
10	Same	10	Samuel Grubb, do	do	3,264 00
14	Same	13	Timothy Kelly, do	do	5,046 28
Oct. 11	Same	11	Radford & Reed, do	do	2,665 91
11	Same	14	W. S. Maus, do	Bloomington & Pekin railroad	1,760 35
15	Same	12	January & Dunlap, do	Northern Cross railroad	13,202 62
15	Same	6	Same, do	do	11,900 00
16	Joel Wright	129	Brink & Atwood, do	Peoria & Warsaw railroad	1,560 60
17	M. McConnel	4	Collins & Leslie, do	Northern Cross railroad	3,965 13
20	Same	3	Timothy Kelly, do	do	5,651 80
20	Same	5	McFarland & Hendrickson, do	do	2,179 01
27	William Kinney	198	Timothy Kelly, do	Alton & Mt. Carmel railroad	2,929 88
27	Same	203	Lawler & Barry, do	do	1,034 81
30	Same	204	Groves & Ryan, do	do	1,307 00
30	Same	215	Wadkins & Baine, do	Great Western mail route	2,438 34
Nov. 7	M. McConnel	22	J. Davenport & Co., do	Northern Cross railroad	1,042 10
7	Same	2	W. S. Maus, do	Bloomington & Pekin railroad	2,769 30
7	Same	21	H. Twitchel, do	do	4,267 00
7	Same	1	January & Dunlap, do	Northern Cross railroad	20,825 00
7	Same	23	Same, do	do	8,754 83
7	Same	24	Same, do	do	8,551 00
7	Same	26	Same, do	do	9,382 81
7	Same	25	Samuel Grubb, do	do	2,584 00
7	Same	27	McFarland & Hendrickson, do	do	1,559 36
12	Joel Wright	132	Brown & De Graff do	Peoria & Warsaw	1,081 37
19	Same	130	Lonnergan & Gylmartin, do	do	1,693 84
19	M. McConnel	28	Collins & Leslie, do	Northern Cross railroad	1,123 36
29	M. K. Alexander	66	J. L. Burleigh, do	Central branch railroad	1,155 25
Dec. 1	M. McConnel	42	John J. Hardin, damages for right of way	Northern Cross railroad	2,166 00
1	Same	29	Twitchel & Hunsaker, contractors	Bloomington & Pekin	2,815 20
3	Same	39	January & Dunlap, do	Northern Cross railroad	11,568 23
3	Same	40	Same, do	do	10,615 62

	5	Same	-	32	W. S. Maus,	do	-	-	Bloomington & Pekin railroad -	1,056 30
	6	Wm. Kinney	-	201	Fitch & Nicholson,	do	-	-	Great Western mail route -	1,012 50
	6	Same	-	202	Groves & Shaffer,	do	-	-	do -	1,004 70
	7	M. K. Alexander	-	181	E. P. Shannon & Co.	do	-	-	Alton & Mt. Carmel railroad -	1,953 94
	7	Same	-	182	Rodgers & Albright,	do	-	-	do -	2,515 75
	8	M. McConnel	-	41	Samuel Grubb,	do	-	-	Northern Cross railroad -	1,275 00
	11	Same	-	33	Radford & Reed,	do	-	-	do -	2,022 35
	11	Same	-	34	Timothy Kelly,	do	-	-	do -	6,242 56
	11	J. Wright	-	131	Blakely & Berry,	do	-	-	Peoria & Warsaw railroad -	1,063 60
	11	M. McConnel	-	30	Radford & Reed,	do	-	-	Northern Cross railroad -	2,473 75
	15	Same	-	243	Ira Davenport & Co.	do	-	-	do -	1,371 34
	19	M. K. Alexander	-	186	Johnson, Shepherd & Co.	do	-	-	Central branch railroad -	1,129 02
	19	M. McConnel	-	242	Perry, Wilson & Co.	do	-	-	Central railroad -	4,236 40
1839.										
Jan.	22	Same	-	219	Jannary & Dunlap,	do	-	-	Northern Cross railroad -	6,018 46
	22	Same	-	216	Chas. G. Scott & Co.	do	-	-	Bloomington & Mackinaw railr'd	1,190 00
	22	Wm. Kinney	-	262	A McK. & J. M. Groves,	do	-	-	Alton & Mt. Carmel railroad -	1,130 37
	22	Same	-	261	Groves & Lewis,	do	-	-	do -	1,365 04
	22	M. McConnel	-	218	J. D. Hunsaker	do	-	-	Bloomington & Mackinaw railr'd	1,412 70
	22	Wm. Kinney	-	259	Lawler & Barry	do	-	-	Alton & Mt. Carmel railroad -	1,017 57
	22	J. Wright	-	133	Lonnergan & Gylmartin,	do	-	-	Peoria & Warsaw railroad -	1,300 33
	22	M. McConnel	-	217	Radford & Reed,	do	-	-	Northern Cross railroad -	2,116 53
	22	J. Wright	-	260	Orrin Hamlin, damages for right of way			-	Peoria & Warsaw railroad -	1,765 00
	22	M. K. Alexander	-	184	David Scott & Co., contractors			-	Central branch railroad -	1,589 70
	22	M. McConnel	-	221	Hendrickson & McFarland,	do	-	-	Northern Cross railroad -	1,706 06
	22	Wm. Kinney	-	263	John Thomas, jr.	do	-	-	Great Western mail route -	1,563 50
	22	Same	-	276	Brink, Atwood & Co.	do	-	-	Central railroad -	1,116 56
Feb.	4	M. McConnel	-	223	Timothy Kelly,	do	-	-	Northern Cross railroad -	7,649 35
	4	Same	-	222	Perry, Wilson & Co.	do	-	-	Central railroad -	7,194 13
	5	Same	-	241	Reed & Radford	do	-	-	Northern Cross railroad -	4,833 05
	5	M. K. Alexander	-	185	Carey, Sandford & Hampton,			-	Central Branch railroad -	1,071 79

FUND COMMISSIONERS' OFFICE, *Vandalia, Feb.* 5, 1839.

WILLIAMSON GATEWOOD,
Secretary to the Board of Fund Commissioners.

REPORT OF THE MINORITY

OF THE

JOINT SELECT COMMITTEE OF INVESTIGATION.

MARCH 1, 1839.

Laid on the table.

Mr. BROWNING, from the Minority of the Joint Select Committee of Investigation, made the following

REPORT:

The minority of the joint select committee appointed to investigate any charges which might be preferred against any member of the Board of Public Works, or any other agent of the State connected with the internal improvement system, beg leave respectfully to submit the following report:

That they could not concur in the decision of a majority of the committee, that it was not the province of the committee to decide upon the facts elicited by the examination they were required to make under the order of the two Houses. On the contrary, they have ever believed that it was the duty of the committee to report their opinion and decision on the testimony adduced before them—the very object of the appointment of committees in such cases being to present, in a condensed form before the Legislature, such facts as it was important for the two Houses to be advised of in reference to the conduct of the officers of the State, and which information could not be obtained in any other as unbiassed manner, except by the tedious process of examinations before one or both Houses.

They feel the more constrained to make a report, as a printed paper, purporting to be an address to the committee, made by the Commissioner of the first district, has been circulated amongst the members; which address was never presented to the committee until it was circulated throughout both branches of the Legislature. We feel also impelled to say that it does not present a full or fair statement of many of the material facts investigated by the committee.

They also regret that the discharge of their duties in the Legislature since the majority of the committee submitted their report, has prevented them from preparing and presenting their report at an earlier day.

In the performance of the duty required of the committee, they proceeded to examine the office of the Fund Commissioners; the result of which examination will be seen by reference to the report of the majority of the committee. We unite in the opinion that the books and papers of the office appear to be kept in proper

order and condition; and they cannot commend too highly the business talent and application evinced by the Secretary of the Board, Mr. Williamson Gatewood.

There is evidently a great defect in the law organizing the Board of Fund Commissioners, as the law does not require the concurrence of a majority of the Board in all their acts, and as there is no check imposed upon them by an examination to be made by any other officers, or by requiring their accounts to be audited and examined. Neither is there a sufficient definition of the duties of the Board of Fund Commissioners, in reference to the check they may impose upon the Board of Public Works. They are required to audit the accounts of the Commissioners of the Board of Public Works, but it is not provided in the original law that they may reject improper accounts and expenditures; and we are informed, when the Board remonstrated against some of the accounts and vouchers presented by some of the Commissioners of Public Works, their power of examining as to the usefulness or propriety of the expenditures was denied. Whether the Board of Fund Commissioners have this power, we will not attempt to decide, as the law is very vague on that subject; but it does appear to us that such a power should be vested in that Board.

We also ascertained that the provision of the internal improvement law which authorizes each of the Commissioners of the Board of Public Works to keep twenty thousand dollars in his hands at one time, was so construed and managed, by at least some of the members of the Board of Public Works, that they always retained a great portion of this sum at all times in their hands. Thus, if one of them had $20,000 on hand, and paid off $7,000, he immediately drew that sum again, without waiting until he had expended the balance on hand. This provision, although salutary at times in preventing lengthy and expensive trips to the office of the Fund Commissioners, nevertheless has been so construed as to give the Commissioners (when they choose to exercise it,) the control of a very large sum of the moneys of the State, which they could use at discretion, without being liable to be called to account for the manner in which they might employ the same. It is with much satisfaction that we have seen this objection in a great measure modified, by the provisions of an act passed at the present session. We regret, however, to state that, under this provision of the law, one of the Board of Public Works, James W. Stevenson, obtained a large sum of money, and, since his decease, he has been found to be a defaulter to the internal improvement fund to the amount of $14,000. We trust, however, that although this is the first, that it will also be the last case, where any of the officers connected with the system will prove to be in arrears to the State, as the application of public moneys to private purposes by public officers cannot in any manner be justified or excused.

Immediately upon the organization of the Board, a number of charges were preferred against M. McConnel, Commissioner of the Board of Public Works for the first district, by A. Brockenbrough, of Morgan county. The investigation of these charges occupied most of the time and labor of the committee. A host of witnesses and a great number of reports and other documents were examined, to enable the committee to come to a conclusion as to the innocence or guilt of the party accused. We much regret that all the committee did not feel bound to make any report on the facts and testimony adduced before them, as they doubt not, if they had done so, much labor and responsibility would have been taken from the minority. Believing it our duty to submit our views on these points, we shall proceed to give them on such points as appear to us to be most material for the consideration of the Legislature. To enable the Legislature to understand fully the opinions of the minority, we insert a copy of the charges and specifications brought forward by Mr. Brockenbrough, which were omitted to be presented at the time the majority submitted their report.

Charges and specifications preferred against Murray McConnel, Commissioner of the Board of Public Works, and acting Commissioner for the first judicial circuit, by Austin Brockenbrough, a citizen of Morgan county, State of Illinois.

Charge First.—Violation of the provisions of the forty-seventh section of an "act to establish and maintain a general system of internal improvement."

Specification first.—In this, that the said Murray McConnel, Commissioner as aforesaid, did, whilst acting Commissioner of the Board of Public Works for the first judicial circuit, enter into a contingent contract, bargain, and understanding, with James E. Waldo and Daniel Waldo, citizens of the town of Meredosia, in the county of Morgan, and State of Illinois; in which said McConnel agreed and bound himself to purchase, of said James E. Waldo and Daniel Waldo, a certain tract or parcel of land, lying within the limits of said town of Meredosia, which is a designated point on the Northern Cross railroad; which said purchase and sale by said Waldos to said McConnel was made and entered into on or about the 21st day of April, 1837, in the town of Jacksonville, in the county and State aforesaid; and which said purchase by said McConnel was made after said McConnel had been appointed to, and accepted of, the office of Commissioner of the Board of Public Works, and previous to the location of said Northern Cross railroad to and through said town of Meredosia having been publicly made known, and that, when said location was made, it passed entirely through, and immediately in contact with, said purchase; and for which said McConnel promised to pay the sum of eight thousand three hundred and thirty-three dollars and thirty-three cents, or thereabouts.

Specification second.—In this, that the said Murray McConnel, Commissioner as aforesaid, did, whilst acting Commissioner of the first judicial circuit, enter into a contract and bargain with James E. Waldo and Daniel Waldo, for the purchase from said Waldos of a certain piece of land in said town of Meredosia, which is divided into four lots; and which said lots are situated north of, and separate from, the purchase mentioned and described in the first specification of this charge; and which purchase of said lots was made by said McConnel on or about the 23d day of March, 1837, and previous to the location of said Northern Cross railroad to and through the town of Meredosia having been publicly made known, the said lots having been purchased by said McConnel for the purpose of selling the same to the State of Illinois for ground for a depot, the railroad having been located subsequent to said purchase, and in the immediate vicinity thereof; and for which said lots said McConnel agreed to pay said Waldos the sum of seven hundred and fifty dollars.

The foregoing charge stricken out, January 28, 1839.

WM. J. GATEWOOD, *Chairman.*

Charge Second.—Violation of the provisions of the thirty-third section of "An act to establish and maintain a general system of internal improvement."

Specification.—In this, that the said Murray McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, on or about the 30th day of July, 1838, positively order and direct the chief engineer of the western district, James M. Bucklin, to locate and prepare for placing under contract, and which was in obedience to said order located and prepared for contract by said engineer, and the same was afterwards placed under contract by said McConnel, acting Commissioner aforesaid, a branch railroad from the Northern Cross railroad to the town of Naples on the Illinois river, in the county of Morgan; which said town of Naples is situated about six miles to the southwest of the aforesaid town of Meredosia; and, further, that said location of said branch railroad was made in utter disregard of the advice and report of said engineer, and of the interests of the State of Illinois, which, agreeably to the engineer's estimates, will sustain a loss thereby exceeding the sum of eighteen thousand dollars.

Charge Third.—Violation of the provisions of the fiftieth section of "An act to establish and maintain a general system of internal improvement."

Specification.—In this, that the said M. McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, on or about the 10th day of July, 1837, let out to contract a certain portion of the Northern Cross railroad, lying between Jacksonville and Meredosia, and which said portion, situated principally in the valley of Wolf run, occupied the same ground, the right of way to which had been previously granted away to the Jacksonville and Naples Railroad Company by an act of the Legislature, and which said right of way said McConnel wholly neglected to obtain the release and relinquishment of from said company, but suffered and directed the same to be occupied by the Northern Cross railroad as aforesaid, to the great damage and injury of the interests of the State of Illinois.

Charge Fourth.—Malfeasance in office.

Specification first.—In this, that the said Murray McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, sometime in the summer of 1838, authorize and direct a cargo of railroad iron to be consigned to his care and address as Commissioner, and to the town of Naples; and upon the arrival of said iron, per steamboat W. L. Robinson, at Naples, said McConnel caused to be handed over the bill or bills of lading for the same to the house of McConnel, Ormsbee & Co., when one of which firm proceeded to Meredosia, where he received said iron, which was not landed at Naples, but forwarded to Meredosia, per steamer W. L. Robinson, by said house of McConnel, Ormsbee & Co.,

and for which services said firm of McConnel, Ormsbee & Co. charged the State of Illinois about the sum of two hundred dollars, and which charge was paid by said McConnel, notwithstanding the railroad contractors on that part of the Northern Cross railroad, to wit, Messrs. Dunlap and January, had previously, and in due time, to obviate said expense of receiving said iron, notified said Commissioner, M. McConnel, that they were prepared to attend to the receiving and storage of the same at Meredosia free of charge to the State; but which proposition was rejected by said McConnel, Commissioner as aforesaid, as he, the said McConnel, Commissioner as aforesaid, was then, and is now, one of the said firm of McConnel, Ormsbee & Co., and therefore had a direct personal interest to advance by refusing to accede to the proposals of the aforesaid contractors, Dunlap and January.

Specification second.—In this, that the said Murray McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, at several times, induce the engineers and other persons employed in the service of the State, and under his directions, to accept from him, in payment of services rendered and expenses incurred by them on account of the State, certain promissory notes of hand, of which said McConnel had become proprietor, although said notes were not equal to the amount they represented in cash, nor could the money, at the time they were so offered by and received from said McConnel, have been collected on them, except at great loss and depreciation; and, further, that the extra allowances made by said Commissioner, M. McConnel, to the engineers and others for services, &c., rendered the State for internal improvement purposes, were frequently regulated so that the amounts allowed by him to said persons should be in due proportion to the amount of said promissory notes they were willing to accept from said McConnel, who would take receipts for such payments as if the money had been actually paid out by said McConnel on account of the State; and which said receipts form a part of said McConnel's vouchers rendered to the Board of Fund Commissioners.

Specification third.—In this, that the said M. McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, on or about the 15th day of October, 1838, at Meredosia, in Morgan county, Illinois, offer to let, by contract, unto Daniel Waldo of said town, the erection of a depot on the Northern Cross railroad on the west bank of the Illinois river, opposite Meredosia, and on condition that said Waldo would cancel and surrender up to said McConnel a certain bond or contract, which he, the said McConnel, had executed unto James E. Waldo and Daniel Waldo, for the purchase of a certain piece of land in the town of Meredosia, and which said purchase is particularly referred to in the first specification of the first charge herein set forth, and which said bond or contract so executed by said McConnel was exclusively on his own personal account, and in nowise related or appertained to his duties as Commissioner of the Board of Public Works.

And which charges and specifications against the said Murray McConnel, Commissioner of the Board of Public Works, the undersigned is prepared to establish; and the General Assembly of the State of Illinois is respectfully requested to order an investigation into the truth or falsity of the same by committee, with power to examine witnesses, take depositions, and send for persons and papers.

Witness my hand and seal, this 27th day of December. 1838.

AUSTIN BROCKENBROUGH, [SEAL.]

Additional specifications to the fourth charge against Murray McConnel, Commissioner of the Board of Public Works.

Additional Specification, No. 1.—In this, that the said Murray McConnel, Commissioner of the Board of Public Works as aforesaid, and whilst acting Commissioner of the first judicial circuit, did, on or about the 11th day of July, 1837, at Jacksonville, in the county of Morgan, Illinois, enter into a contingent contract, bargain, and understanding, with James E. Waldo and Daniel Waldo, and to the following effect, to wit: That, on condition that said James E. Waldo and Daniel Waldo would cancel a certain bargain and contract respecting four certain lots, and take back said lots, situated in the town of Meredosia, and mentioned in the second specification of the first charge as having been purchased by said McConnel of said Waldos on or about the 23d day of March, 1837, he, the said McConnel, would have the same valued by two persons, one of whom should be chosen by him, and the other by the said Waldos; and that he, the said McConnel, would purchase the same lots from said Waldos, for the use of the State of Illinois, at the appraised value thereof, and so that the said Waldos should realize a more advantageous bargain than had been concluded for the same lots between said Waldos and said McConnel as aforesaid; and said McConnel urged, as a reason for desiring this arrangement, that he had been informed by James M. Bucklin, the principal engineer, that said lots would be needed by the State for the erection thereon of a depot, and that the same could not be purchased for such purpose from him, said McConnel, as he was Commissioner of the Board of Public Works; and, in consideration whereof, said Waldos did consent and agree to cancel their bargain with said McConnel, and take back said lots, although said McConnel failed to perform the promises made by him as inducements for said Waldos so to do.

The above stricken out by order of the committee, January 7, 1839.

WM. J. GATEWOOD, *Chairman.*

Additional Specification, No. 2.—In this, that the said Murray McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works of the first judicial circuit, did, sometime in the summer of 1838, participate in the profits arising from the following transaction, the same being in violation of the spirit and meaning of "An act to establish and maintain a general system of internal improvement," to wit: That, about the beginning of the year 1838, a cargo of railroad iron from Liverpool was consigned to the house of Godfrey, Lowrie, & Small, of New Orleans, by Charles Oakley, Fund Commissioner, who authorized said house to draw on the State Bank of Illinois for about the

sum of $2,000, being the necessary amount to pay for freight and charges on said iron from Liverpool to New Orleans, and thence to Meredosia, on the Illinois river; and that the said Godfrey, Lowrie, & Small, after receiving said iron in New Orleans, shipped the same, per steamer W. L. Robinson, to the town of Naples, on the Illinois river; and that said house of Godfrey, Lowrie & Small sold unto the captain of said steamer a draft drawn by authority of said Oakley, and on the State Bank of Illinois, for the amount necessary to pay expenses on said iron to and in New Orleans; for which said draft said captain of said steamer paid said Godfrey, Lowrie & Small the money; and that, on said captain of said steamer arriving at Naples, he sold the said draft to the house of McConnel, Ormsbee & Co.; and which house returned the draft to New Orleans without presenting the same to the bank; and said McConnel, Ormsbee & Co. charged the State of Illinois a commission for advancing said captain of said steamer the money on the same, notwithstanding said draft, at the time the said McConnel, Ormsbee & Co. purchased the same, was the property of the captain of said steamer W. L. Robinson, and the State of Illinois could in no respect be deemed a party to the transaction, further than liability for the amount called for on the face of said draft; and which said captain of said steamer, or said McConnel, Ormsbee & Co. could easily have had cashed at the counter of said bank; and which unjust charge and imposition on the State of Illinois was allowed and paid to said house of McConnel, Ormsbee & Co. by the aforesaid Commissioner, Murray McConnel, who, being a partner of said firm of McConnel, Ormsbee & Co. had a personal interest to promote by so doing.

The foregoing stricken out by order of the committee, January 7, 1839.

WM. J. GATEWOOD, *Chairman.*

Additional Specification, No. 3.—In this, that the said Murray McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, sometime about the month of August or September, 1838, purchase, of a certain Charles Collins, a small steamboat for the use of the State of Illinois; and for which said McConnel paid said Collins the sum of two thousand five hundred dollars agreeably to said McConnel's accounts for the month of September, 1838, as rendered to the Board of Commissioners of Public Works; and that said McConnel did, at the same time, enter into a contingent contract, bargain, and understanding with said Collins, that said boat should be repaired and put in complete order, so as to be fit for the service of surveying the Illinois river, said boat being at the time of purchase totally unseaworthy; and that said money was paid for said boat before it was repaired in pursuance of said contract; and that the sum so paid for said boat in its condition at the time of purchase far exceeded the true value thereof; and which said boat could not then, nor for several months afterwards, have been applied to the public service to any advantage, proceeding from the extremely low stage of water in the Illinois river and the rapid approach of winter; yet, notwithstanding these

circumstances, said boat was so purchased and paid for, and said contingent contract entered into by said McConnel, Commissioner as aforesaid, and in violation of the spirit and meaning of "An act to establish and maintain a general system of internal improvement," and prejudicial to the interests of the State of Illinois.

CHARGE FIFTH.—Neglect of duty.

Specification.—In this, that the said Murray McConnel, Commissioner as aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did render unto the Board of Commissioners of Public Works, to be placed by them to his credit, a large amount of accounts exceeding $1,000, and alleged to have been expended by him, the said McConnel, in the service of the State for internal improvement purposes; and that, when said accounts were examined, it was discovered that similar accounts for the identical claims set forth in the accounts so rendered as above specified had been previously allowed said McConnel, and passed to his credit; said McConnel exhibiting thereby a gross dereliction of duty as acting Commissioner of the Board of Public Works.

Witness my hand and seal, as prosecutor of the foregoing charge and additional specifications.

AUSTIN BROCKENBROUGH, [SEAL.]

Additional specification to charge second, preferred by Austin Brockenbrough against Murray McConnel, Commissioner of the Board of Public Works, on the 27th day of December, 1838, and which additional specification was preferred against said McConnel, Commissioner as aforesaid, before the Committee of Investigation, on Wednesday, the 16th day of January, 1839, by the aforesaid Austin Brockenbrough.

Additional Specification.—In this, that the said Murray McConnel, Commissioner aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, on or about the 13th day of August, 1838, and whilst travelling from the town of Meredosia to the town of Jacksonville, in the county of Morgan, and State of Illinois, and in company with William French, Thomas T. January, and James Dunlap, citizens of said county of Morgan, and in presence of said French, January, and Dunlap, and within hearing of said French, make and utter the following declarations, and which were particularly addressed to said French, January, and Dunlap, to wit: "That, from the commencement, it was the understanding (with whom said McConnel did not say) that he, the said McConnel, was to make the said Northern Cross railroad up Wolf run in consideration of their relinquishing the right of way to the State; (and said French understood said McConnel to allude particularly to the Jacksonville and Naples Railroad Company, which claimed the right of way up said Wolf run;) and, further, that the State of Illinois should make a branch railroad from said Northern Cross railroad to the town of Naples on the Illinois river, as additional com

pensation to said Jacksonville and Naples Railroad Company for said relinquishment of the right of way to the State of Illinois through the valley of said Wolf run by said Jacksonville and Naples Railroad Company; and, further, said McConnel affirmed that said Northern Cross railroad could not have been constructed over any other ground than through the valley of said Wolf run, as said Jacksonville and Naples Railroad Company would have enjoined any attempt to make the Northern Cross railroad in any other direction than through the valley of said Wolf run," or words to that effect.

And, further, that said McConnel, Commissioner as aforesaid, did, about the month of March, 1837, and in the branch of the State Bank of Illinois at Jacksonville, and in the presence and hearing of a certain William French, refuse to accept an offer of seven thousand dollars ($7,000) from a certain Charles Collins for all his, the said McConnel's interest in Morgan city and lands adjacent; which said interest is now situated upon the route of the Northern Cross railroad between Jacksonville and Meredosia; and said offer by said Collins to said McConnel was made whilst said McConnel was acting Commissioner of the Board of Public Works, and previous to the permanent location of said Northern Cross railroad between Jacksonville and Meredosia having been publicly made known; and that said interest of said McConnel in and to Morgan city and lands adjacent lies in and about the valley of said Wolf run; and that said McConnel, acting Commissioner as aforesaid, selected such a location for the said Northern Cross railroad as to secure the passage of the same through the said Morgan city, and through said lands in which said McConnel was then interested as aforesaid, and situated in and about the valley of said Wolf run; and which said Northern Cross railroad now runs through, near to, and in contact with, said lands for about the distance of three miles; and which said location of said railroad was adopted and placed under contract by said Commissioner on or about the 10th day of July, 1837, and about the period of three or four months after said Collins had made said offer to said McConnel for all his interest in and to Morgan city and lands in which said McConnel held an interest situated in and about the valley of Wolf run as aforesaid; and which said location of said Northern Cross railroad, thus adopted and placed under contract by said McConnel, increased the length of said Northern Cross railroad between Jacksonville and Meredosia about two miles more than was necessary and proper, as a practicable and more direct and eligible location through the valley of Davis' branch might have been obtained by said Commissioner, so as to have made the distance between Jacksonville and Meredosia at least two miles shorter than by the location so made, adopted, and placed under contract by said Commissioner, and who purposely and intently kept the engineers employed to survey the several routes between Jacksonville and Meredosia ignorant of the disadvantages to which the State of Illinois would be exposed by laying out the said Northern Cross railroad through the valley of said Wolf run, to wit, that by so doing, it would infringe the chartered rights of the Jacksonville and Naples Railroad Company, and thereby furnish a pretext to said company to set up a claim against the State of Illinois for exorbitant damages as indemnity for such infringement; and that, by thus culpably neglecting his duty as acting

Commissioner of the Board of Public Works, in failing to caution said engineers of the danger which threatened the public interest by recommending the selection of the Wolf run route for the permanent location of said Northern Cross railroad in preference to the route by Davis' branch, the said engineers, to wit, Messrs. Bucklin and Pollock, were induced to recommend the selection of the valley of Wolf run as the most judicious route for the location of said Northern Cross railroad; and which said report and recommendation in favor of said Wolf run route would probably have never been made by said engineers had they been fully apprized of all the unfavorable circumstances operating against such a location, and of the existence and influence of which they were kept profoundly ignorant, either by gross neglect or culpable design of the said acting Commissioner, who had a personal interest of great magnitude to advance, situated in Morgan city and lands through which the said railroad would pass, by the adoption of the location as recommended by said engineers; and which omission of duty on the part of said McConnel, acting Commissioner as aforesaid, will cause a loss to be sustained by the State of Illinois to the amount of fifty thousand dollars ($50,000,) or thereabouts, inasmuch as the Board of Public Works, at their June meeting in the year 1838, authorized a branch railroad, not exceeding four miles in length, to be made from said Northern Cross railroad to the town of Naples on the Illinois river in consideration of said Jacksonville and Naples Railroad Company relinquishing unto the State of Illinois the right of way which said company claimed through the valley of said Wolf run; and which branch railroad and its appendages so authorized will cost the State of Illinois the sum of fifty thousand dollars ($50,000,) or thereabouts; and which enormous sacrifice of the public money was caused solely by neglect and omission of duty on the part of Murray McConnel, Commissioner as aforesaid; and whose imperative duty it was to have used all possible precautions to guard and protect the public interests from such impositions of said private incorporated railroad companies, and without reference to the precise date when such incorporated companies might have acquired such privileges, whether antecedently or subsequently to the passage of "An act to establish and maintain a general system of internal improvement," in force the 27th day of February, 1837; and which said act took effect nine days after said Jacksonville and Naples Railroad Company obtained their act of incorporation, which took effect on the 18th day of February, 1837, and upon which said act of incorporation of said Jacksonville and Naples Railroad Company, it was specially intended the provisions of the 50th section of the aforesaid "Act to establish and maintain a general system of internal improvement" should have retrospective effect and action, and point, bearing, force, and operation against the same; but which palpable and self-evident construction of said "Act to establish and maintain a general system of internal improvement," it was to the private interest of said McConnel, Commissioner as aforesaid, to pervert, disregard, and construe otherwise, and to the great injury and damage of the State of Illinois as aforesaid, inasmuch as the branch railroad aforesaid is of no manner of use to the State of Illinois, but rather prejudicial to the same as an excrescence of the system of internal improvement, and must be considered to all intents and purposes as a clear speculation off the State of Illinois, and the result of premeditated design

and cupidity on the part of a faithless public officer, the Commissioner aforesaid, and whose actings and doings in all matters and things hereinbefore related have been governed by self-interest, and are in diametrical opposition to, and in violation of, the 27th and 33d sections of "An act to establish and maintain a general system of internal improvement," and contrary to the spirit, letter, and intention of said act, in the economy and judicious management with which it requires said system should be conducted.

And which additional specification to the second charge preferred by me against Murray McConnel can be substantiated by five witnesses, to wit, William French, and Thomas T. January, and James M. Bucklin, and William Pollock, and Miron Leslie, and the necessary maps, reports, and other documents.

Witness my hand and seal, this 21st day of January, 1839, at Vandalia.

A. BROCKENBROUGH, [SEAL.]
Accuser of M. McConnel.

Additional specification to the first charge preferred by Austin Brockenbrough against Murray McConnel, Commissioner of the Board of Public Works, and acting Commissioner of the first judicial circuit, and on the 27th day of December, 1838, and which additional specification was preferred against the said McConnel by the said Brockenbrough before the Committee of Investigation, at their meeting on Wednesday, the 16th day of January, 1839.

Additional Specification.—In this, that the said Murray McConnel, Commissioner aforesaid, and whilst acting Commissioner of the Board of Public Works for the first judicial circuit, did, on or about the 12th day of June, 1837, and in the county of Morgan, and State of Illinois, purchase, of a certain S. C. Fogus, a citizen of said county, a lot of land lying within the incorporated limits of the town of Jacksonville, in the county, and State aforesaid, and known and designated as lot number seven (7) in Duncan's north addition to said town of Jacksonville; for which said McConnel agreed and bound himself, by a written bond, to pay unto said Fogus about the sum of four hundred and twenty dollars ($420, and which said bond accompanies this specification;) and, further, that said lot so purchased by said McConnel from said Fogus is situated immediately south of and adjoining a tract of land through which the Northern Cross railroad is now permanently located; and which said tract of land was condemned and the same purchased by said McConnel for the use of the State of Illinois for railroad purposes, to wit, for erection thereon of a depot, engineer's office, and other needful buildings, as appendages to said Northern Cross railroad, and construction thereon of said Northern Cross railroad; and which said purchase of lot number seven (7) of said Fogus was made by said McConnel for his own private use and benefit, and after said McConnel had been appointed Commissioner of the Board of Public Works, and before said Northern Cross railroad had been permanently located through said town of Jacksonville, and the same publicly made known; all of which actings and doings

on the part of said McConnel in purchasing said lot number seven (7) as aforesaid were in direct violation of the 47th section of "An act to establish and maintain a general system of internal improvement." And which additional specification to the first charge preferred by me against said Murray McConnel, Commissioner aforesaid, can be substantiated by one witness, to wit, S. C. Fogus, and the purchase bond of said property, herewith submitted, and map of the town of Jacksonville also submitted.

Witness my hand and seal, this 21st day of January, 1839, at Vandalia.

A. BROCKENBROUGH, [SEAL.]
Accuser of M. McConnel.

We also present the answer of Mr. Brockenbrough to an interrogatory propounded to him by Mr. McConnel, as evincing his object in bringing forward the charges.

Answer of A. Brockenbrough: "I believed Mr. McConnel had been guilty of numerous derelictions of duty, as Commissioner of the Board of Public Works, and felt that my own interests had been sacrificed by his misconduct; and I never would have complained against him had he not have been a candidate for re-election to the office of Commissioner, of which I was convinced he had provod himself unworthy."

It will be seen that there is much of military form and precision in the manner in which the charges and specifications are presented. This probably was unnecessary; but, as the charges are presented in that shape, we proceed to give our attention to them as they are presented.

In relation to the first charge which accuses the Commissioner of the first judicial circuit with having entered into a contingent contract for the purchase of property, in Meredosia, of James E. and Daniel Waldo, the following facts were presented to the committee: A bond was produced purporting to be executed by Mr. McConnel to the Waldos, dated the 5th January, 1837; in which he agreed that, if they would buy out Joseph Duncan's interest, or part of it, at a sum not exceeding $25,000, he would take at least one-third of the purchase at cost. There is also a proviso in the bond permitting Duncan to except a number of lots which he intended to donate to Illinois college. (See copy of bond in the report.) This bond, it was admitted, was executed by Mr. McConnel. A question arose, however, as to the time it was executed. The date of the bond is prior to the passage of the internal improvement law, or the election of Commissioners. James E. Waldo testified that it was executed on the 21st of April, 1837; that it was written by him, and was ante-dated because, in a contract which he and D. Waldo had made a short time previous with Mr. McConnel for the purchase of some lots in Meredosia, he had been requested by Mr. McConnel to date it at that time in January, to avoid the provision of the 47th section of the internal improvement law; and that it was signed by Mr. McConnel after a deliberate examination of it, and some days after the trade had been first made. The consent of Mr. Waldo to aid the Commissioner to evade the penal provisions of law, and his participation in that act, we do not consider very creditable to him as a citizen; yet, after a full and patient examination of all the testimony, we are satisfied that his statement in this matter is materially correct. Waldo is proved, by the testimony of

Mr. Thompson, to have been in Meredosia on the 5th of January. Gov. Duncan also testifies that his intention to donate the lots to Illinois college was not made public in January, nor did he ever mention it to McConnel or to Waldo until he made the purchase of him in March or April, 1837. Of course, then, Mr. McConnel could not have known it so as to have put it into the contract with Waldo, if it had been made in January. Besides this, Mr. McConnel did not attempt to bring forward any evidence to show that he had made any contract with the Waldos in January, or had even seen them during that month.

The property purchased consisted of a large number of lots situated in the upper part of the town of Meredosia. The Northern Cross railroad, as first located in that town in the spring of 1837, commenced at the upper part of the town, at a point designated by Mr. McConnel and passed through or adjoining some of the lots purchased of Duncan. These facts are proven by January, Pollock, Bucklin, and others. The road continued to be located as first marked out. During that year it was staked out, und work done on it by the contractors, and the same paid for by the Commissioner. There seemed to be dissatisfaction with the location, however, by the contractors, and, at their solicitation, the Commissioner authorized them to tell the chief engineer to locate it where he thought best. He accordingly changed the line so as to strike the Illinois river much lower down. This last line was worked on, and the road is completed on this location. By the alteration of the road, no part of the Waldo purchase touched or adjoined the railroad, though some of it is within a few feet of the road; but the greater portion of it was situated further up the river. With this last location the Commissioner was dissatisfied, and repeatedly evinced that dissatisfaction to others. One reason, as stated by some of the witnesses, was that he considered the upper landing as the best for steamboats.

If the first located line had continued to remain the permanent location, there is not a doubt in our minds that it would have been a direct violation of the forty-seventh section of the internal improvement act, which prohibits Commissioners from purchasing town property situated on the immediate line of the road. As to the effect in a legal point of view, which the subsequent change in the location may have made, we do not feel it incumbent upon us to give an opinion. But the fact of the contract with the Waldos having been made before the road was located, the design and object of that purchase, and the ante-dating of the bond, evince, to our minds, conclusive evidence of a disposition on the part of the Commissioner to evade the spirit and meaning of the internal improvement act, if he has not in reality violated its very letter, for the purpose of private pecuniary advantage.

The second specification of the first charge and an additional one connected with the same subject, and which relate to a purchase, made by Mr. McConnel of J. E. and D. Waldo, of four lots in Meredosia, were not investigated, because the lots were shown not to be adjoining to and on the immediate line of the railroad.

One of the charges also in relation to the railroad iron, and improper commissions charged thereon by the house of McConnel, Ormsbee & Co., was stricken out by the committee, because, in their opinion, it was a matter which solely concerned the contractors and the commission house,

and one in which the State had no interest. There is another charge on the same subject which was not examined, on account of the absence of the witnesses at the time the committee were prepared to go into that investigation. Several affidavits however were procured by Mr. McConnel from James Dunlap and H. Van Syckel, which appear to exonerate him from any thing improper in the transaction. Not having heard all the testimony, however, which was referred to to sustain the charge, we do not give any opinion of the correctness or falsity of the charge.

As it regards the charge about the location of the Naples branch, so as to make it on a route longer than the one recommended by the chief engineer, and more costly than the one recommended, by $18,000, we would state that it is decidedly our opinion that the Commissioner acted improperly in selecting the longest location contrary to the advice of the principal engineer. It is true there are some contradictory statements and calculations; for instance, the one made by the appraisers, who assess the damages for the right of way for a road of two and a half miles, and over smooth and unimproved prairie (the owners of which land they do not know) at $5,000; whilst it is stated by the engineer that the right of way ought not to cost any thing, "as the line intersects no town lots, and passes through no enclosed grounds." There is also another item in the amount of expense which the Commissioner calculated would ensue if the short route was adopted; that is—"pay for work done upon the old route" by the Naples Railroad Company, "and lose it," $16,000. This sum appears quite large when we contrast the fact that this same work was afterwards estimated by the engineers of the State, when the Commissioner ordered the road to be located on that line, at less than $3,000. There is still another item of $2,850 estimated for right of way over unimproved land belonging in part to the owners and controllers of the Naples Railroad Company, which might appear to be large, were it not for the fact that it was shown to us that this same land was owned jointly by the owners of this railroad and the Commissioner, who was of course well qualified to judge of the disadvantages to which the land was subjected by the Northern Cross railroad passing over it.

We would refer to the correspondence between the Commissioner and the chief engineer on this subject, as giving all the testimony necessary to sustain our opinion. It does appear to us that there is evidently evinced an overweening disposition to favor the Naples Railroad Company, from some cause or other, rather than to protect exclusively the interest of the State.

The third charge is the violation of the fiftieth section of the internal improvement act, in not obtaining the relinquishment of the right of way of the Naples and Jacksonville Railroad Company before the Northern Cross railroad was located down Wolf run. This section of the law is very vague in its provisions. Its intention and meaning doubtless were to make it obligatory on the Board of Public Works to obtain releases from all incorporated companies who might claim damages of the State for interfering with their right of way. As this company had the right of constructing their road down Wolf run by their charter, it does seem to us to have been the duty of the Commissioner to have obtained the relinquishment of the company before any work was done on the route down Wolf run. His neglect to do this has enabled this company to

claim of the State the construction of the lateral branch to Naples, or heavy damages for constructing the Northern Cross railroad over the Wolf run route.

Another lengthy charge connected with this branch of the investigation is, improper conduct in locating the Northern Cross railroad down Wolf run, which, it is alleged in the charge, was to the prejudice of the State, and to the personal advantage of the Commissioner. There was no evidence adduced before the committee showing that Mr. McConnel had attempted to influence the engineers in the survey of the route, or in the location line recommended by them. There are some facts which were elicited during the investigation to which it may be proper to allude.

The distance from Jacksonville to Meredosia, by the travelled route, is twenty miles; and the distance from Jacksonville to Naples, by the travelled road, is about twenty-two miles; the distance between Naples and Meredosia about six miles. The length of the Northern Cross road on the located line down Wolf run, between Jacksonville and Meredosia, is above twenty-four miles; and the distance from the same place to Naples, by the same road and the lateral branch, is about twenty-two miles. If the road from Jacksonville to Meredosia had been located on either of the shorter routes it would not have passed within five miles of Naples. As it is, it now runs within two and a third miles of that place. There was evidence before the committee from the report of the engineers that the Wolf run was the cheapest route at the grade at which they were directed to locate the road. The grade to which that part of the Northern Cross road between Jacksonville and Meredosia is located, is forty feet to the mile. In answer to a question propounded to Mr. Bucklin, the chief engineer of the district, he states that, if the grade had been raised to fifty feet to the mile, it would have saved one hundred thousand dollars to the State, and have shortened the distance three miles between those places. This route would not have gone down Wolf run, or been within five miles of Naples. Why it was not thought expedient to raise the grade to fifty feet to the mile, we are not informed. The grade fixed for the location of roads by the Board of Public Works at their first meeting was thirty feet to the mile. This grade was varied from in the location, and in some instances it was changed to seventy-five feet to the mile, as in the Pekin and Tremont road, and on the Northern Cross road immediately opposite to Meredosia. It does appear to us that the grade should have been altered to save the large sum of $100,000, as the road would still be useful for locomotives.

It is here perhaps proper to state that the Commissioner admitted he owned an interest in a warehouse and part of a lot in Naples, in which the firm of McConnel, Ormsbee & Co. were doing business; but it was not shown that he had any other property in that place. The President of the Naples Railroad Company also testified that Mr. McConnel did not own any interest whatever in said railroad. The only interest which the Commissioner was shown to possess, was an undivided eighth part of a tract of land on which Morgan city was laid out, and which consisted of four or five thousand acres of land. This tract is owned by Collins and Leslie, the owners of the Naples railroad, and Mr. McConnel, and perhaps

others, and is situated in the valley of Wolf run, and contiguous thereto; and the Northern Cross railroad as now located passes through it, and near it, for above two miles. It was in evidence that Mr. McConnel purchased this interest in 1836, before he was elected Commissioner; and that he sold the same, in the summer or fall of 1838, to Charles Collins.

The reason offered for constructing the lateral branch to Naples on the route of the road begun by the Naples Railroad Company, was because of the large amount of damages claimed by said company of the State for occupying their right of way down Wolf run. It appeared in evidence that the two owners and controllers of that company, Messrs. Collins and Leslie, were contractors on the Northern Cross road between Jacksonville and Meredosia, and that, soon after the contract was let out in July, 1837, they commenced work on said road in Wolf run. Subsequently, they sold out their contract after a large amount of work was done on that part of the road, and then they claimed damages of the State for constructing the Northern Cross road over the very ground which they themselves had worked. This appears to us as evincing rather a disposition to make a profit out of the State, which should have been wholly discountenanced by the Commissioner.

As to the charge that the Commissioner had paid the engineers for their claims on the State in promissory notes instead of cash, we refer to the testimony of Mr. Bucklin and Mr. Von Horn, who substantiate the fact of payment being made to them in promissory notes instead of cash. It is not shown that the State lost any thing by this transaction; but the practise we feel constrained to say is pernicious, and if persisted in, or practised to a large extent, will tend to make engineers and contractors claim greater sums from the State for their services than they would do if they were paid in cash. There is nothing imperative in the internal improvement act on this subject, and it cannot therefore be considered a violation of law, but it is a precedent which we think should not be allowed or countenanced in those entrusted with the disbursement of large amounts of public money.

Another charge is, that the Commissioner offered to give to Daniel Waldo the construction of a depot opposite to Meredosia on the Northern Cross road, if he would give up the bond executed to the Waldos for the purchase of the property mentioned in the first charge. For the proof on this point, we refer to the evidence of Daniel Waldo, who fully sustains this charge of the offer, although the contract was never executed. Daniel Waldo says it was because we could not get the contract from his brother James; and Mr. McConnel, in a letter on file, written some time after the first conversation on that subject, says he did not then want the depot erected, as the engineers reported it would not be wanted immediately.

The charge of presenting double vouchers to the Board of Fund Commissioners was not examined, as Col. Mather (the principal witness relied on to sustain the charge) was not in Vandalia at the time the committee were prepared to investigate that subject.

One other charge is about the purchase of a small steamboat from Charles Collins to survey the Illinois river. There are different statements as to the probable value of the boat. One of the witnesses thought

the hull to be worth not more than two hundred dollars, but he did not know what the engine was worth. Two other witnesses (Mr. Collins and Mr. Leslie) prove that the boat was well worth the sum which was to have been paid for it—$2,500, and that it was well suited for the use for which it was designed. The contract for it was a conditional one, and the purchase was to be valid, provided Collins put a cabin on the boat, and fitted it up in six or seven days, so that it would be accepted by the engineers. This is proven by Mr. Leslie. Collins failed to get the boat in readiness, and the Commissioner refused to receive the boat. It is proved also, by both Collins and Leslie, that Collins never did receive any money on the contract.

The only thing which appears improper in this transaction, so far as proof was before us, is this: that, at the time of making the contract with Collins, the Commissioner took a receipt from him for $2,500, for the amount of the boat. Although this amount was never paid over, yet we found, on the abstract of payments on file in the office of the Fund Commissioners, made by Mr. McConnel during the month of September, 1838, an entry to this effect:

"To amount paid Charles Collins for small steamboat, $2,500."

At the foot of the abstract for that month is a certificate, written and signed by the Commissioner, that the foregoing abstract was a correct account of the money paid out by him during the month of September, 1838. The Commissioner was accordingly credited with this amount, and it remained uncorrected until some time in December, 1838; when the Commissioner, in making out his abstract, charged himself with this amount of $2,500, and withdrew the receipt signed by Collins for the amount of the boat. As the contract was made about the 12th September, and was to have been fulfilled in six or seven days, and as there was no money paid on it, it does appear to us to have been highly improper to have charged the State with it, and thus enable himself to retain this amount in his hands for months which he had never paid out.

The last charge on which we have to report is, that of the purchase of a lot in Jacksonville, of S. C. Fogus, on the immediate line of the Northern Cross railroad; which purchase was stated to be made prior to the location of said road being publicly made known.

The Commissioner had a piece of ground condemned for railroad purposes in Jacksonville, being nearly square, and containing about an acre. On this he had erected a railroad office, a stable or engine-house. The Northern Cross road is located through this lot, and a depot is proposed to be erected on it. The lot purchased by Mr. McConnel of Fogus adjoins this railroad lot, as was proved by Gov. Duncan, Mr. Bucklin, and Mr. Fogus. It was purchased a few days before the location of the road was made public; and Fogus testified that, if he had known the road was to be located where it was, he would not have taken the price he obtained for the land. It does appear to us that this charge is fully sustained, and that the Commissioner has been guilty of an entire violation of the provisions of the forty-seventh section of the internal improvement act in making this purchase.

We have thus gone through with the charges made against the Commissioner of the first circuit, and now leave the facts and opinions here presented to the Legislature for its consideration.

The committee was also requested by John Murray to inquire whether the Commissioner of the second judicial circuit, Gov. Kinney, had not violated the eighteenth section of the internal improvement act, in changing the location of the Great Western mail route in Belleville, and at other points.

It was admitted that the location of the road had been changed in Belleville, and at various other points; and we are not prepared to say that the Commissioner had not the right to make the changes, if he was satisfied, from the report of competent engineers, that the road might be changed with advantage to the interest of the State, and with convenience to the public. In relation to the change made in Belleville, it appears, from papers presented to the committee, that it was called for by a majority of the citizens of the town, and was of public utility.

The question was incidentally raised on this investigation, whether a Commissioner had the right to change the location of a road to a more costly one, when private citizens agreed to make up the deficiency of cost between the two locations.

It appears to us that it would be exceedingly improper to sanction such a practice, as it must necessarily have a tendency to make private citizens bid against each other for the location of routes, and will also leave a discretionary power of changing and altering routes to suit private views rather than public convenience, with which it would be altogether improper to entrust any public officer.

The charges made against Gov. Kinney did not imply that he had been guilty of corruption, but he was exonerated of that by the person requesting the inquiry, who thought the spirit and letter of the law had been violated by an improper interpretation.

Charges were also brought forward, by a letter from E. Harkness, against the engineer in charge of the Peoria and Warsaw road, and the Commissioner present at the lettings of said road made on the 17th day of April, 1838, for improper conduct in not giving the work to the lowest responsible bidder.

Another charge was presented to the committee, from James Oakey and Egbert Dewey, against A. R. Parker, resident engineer on the Quincy and Meredosia railroad, for "incompetency"—"neglect of duty"—"blindly yielding the unwarrantable demands of individuals for work under contract, without regard to rights and interest of the State"—"making false returns of bills of expenses"—and "a course of conduct to assistant engineers insulting and dishonorable."

These several charges did not reach the committee until at a late period of the session, and consequently no proceedings were had on them.

We have thus alluded to the various charges presented for the consideration of the committee.

There are many facts and inferences to be drawn from the result of the investigation, to which reference might be made with advantage, were it not that the variety of the charges presented before us has drawn this report to a much greater length than we anticipated.

In concluding our report, after the most arduous and perplexing investigation ever before made in this State, we may be permitted to remark that, although the State has been run to some expense in sending for witnesses required by the person bringing the charges, and by the

party accused; yet we cannot but hope and believe that it will have a salutary effect upon public officers hereafter, who will thus see that their official conduct will be investigated, and improprieties or corruption exposed, although the investigation may cost the State some money, and the members of the committee much labor and responsibilty. We trust, however, that an occasion for such an investigation may not again occur for an indefinite series of years.

All which is respectfully submitted.

O. H. BROWNING,
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